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ABSTRACT

This volume is the second in a series of four publications related to a project on the creation of a Regional University Network on Governance and Management of Higher Education in South East Europe. It consists of a concise presentation of the nuts and bolts of strategic planning and management in higher education. The book takes the reader through a set of definitions of the subject to a look at different approaches to planning, to focus on how to plan and develop operation strategies. The second half of the volume presents examples of good practice, ranging from selected mission statements to the strategic plan and planning cycle of two universities. Strategic planning and management are considered at various levels: the whole institution, the faculty, the department or school, the subject group or research group, and the individual. The chapters are: (1) "Introduction"; (2) "Governments and Higher Education"; (3) "Structure and Process"; (4) "How To Plan"; and (5) "Operational Strategies." Appendixes contain descriptions of mission statements, strategic plans, learning and teaching strategies, governance and policy making, and plans in Romanian universities. (Contains 9 figures, 4 tables, and 77 references.) (SLD)

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Policy-Making, Strategic Planning, and Management of Higher Education

John Taylor and Adrian Miroiu

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Papers on Higher Education

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Regional University Network
on Governance and Management
of Higher Education in South East Europe

Policy-Making, Strategic Planning, and Management of Higher Education

John Taylor and Adrian Miroiu

Bucharest
2002

4

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Preface

This volume is the second in a series of four publications on aspects of governance in higher education that are being produced as a partial outcome of the joint UNESCO-CEPES - European Commission project to create a Regional University Network on Governance and Management of Higher Education in South East Europe. The Programme was originally presented through Table One "Democracy and Good Governance" of the Stability Pact for South East Europe as part of its "quick-start package". It has been developed through the Task Force on Education and Youth, Enhanced Graz Process, a coordinating mechanism for educational co-operation with South East Europe.

The basic assumption of the Programme is that, when considering the overall situation in the countries of the region, education in general - higher education in particular - should play a key role in supporting the search for sustainable peace, reconciliation, and development of civil society.

Its wider objectives include the following:

- to integrate the universities and higher education authorities of South East Europe into existing European networks;
- to develop higher education policies that are based on European standards and international best practice in the areas of strategic management, financial management, relations with civil society, and quality assurance;
- to develop national and institutional capacities and skills in higher education strategic management and policy making;
- to stimulate the establishment and/or consolidation of new structures and mechanisms of financial management, based on the principles of university autonomy and accountability, while encouraging the establishment of links with civil society and local economies.

The anticipated outcomes of the programme are expected to include the following: *(i)* integration of the countries of South East Europe into the European Higher Education Area as defined in the Bologna Declaration; *(ii)* the creation of a network of the authorities and institutions involved in higher education through which good practice in academic governance, policy making, strategic and financial management, and quality assurance in higher education can be exchanged; *(iii)* strengthened national institutional capacities and skills in regard to strategic management and policy making in higher education; *(iv)* the creation of new structures and mechanisms for financial management, based on the principles of university autonomy and accountability, while encouraging links with civil society and local economies.

This volume, the second in the series of four, consists of a concise presentation of the nuts and bolts of strategic planning and management in higher education. The authors, a British academic - J. Taylor, and a Romanian academic - A. Miroiu, walk the reader through a set of basic definitions of the subject to a look at different approaches to planning, to focus on how to plan and to develop operation strategies. The authors blend the practical with the theoretical. The second half of the volume cites examples of good practice ranging from selected mission statements (Sarah Lawrence College of the USA and St. Stephen University of Hungary), to the Strategic Plan of the University of Edinburgh and the Planning Cycle of the University of Melbourne in Australia. The end result should be successful, proactive, higher education systems and institutions.

We offer this second publication, that is published as a volume in the UNESCO-CEPES series, *Papers on Higher Education*, in the hope that it will contribute strongly to the anticipated goal of creating a successful Regional University Network of Governance and Management of Higher Education in South East Europe.

Jan Sadlak
Director of UNESCO-CEPES

Chapter 1

Introduction

1.1. WHAT ARE THE PURPOSES OF HIGHER EDUCATION?

From the outset, it is necessary to understand what the purposes of higher education are. A clear understanding will shape the responses of institutions and individuals to the need for strategic planning and management. One definition that identified four purposes for higher education was offered by the National Committee of Inquiry into Higher Education in the United Kingdom, chaired by Sir Ron Dearing in 1997:

a) to inspire and enable individuals to develop their capabilities to the highest potential levels throughout life, so that they grow intellectually, are well equipped for work, can contribute effectively to society, and achieve personal fulfillment;
b) to increase knowledge and understanding for their own sake and to foster their application to the benefit of the economy and society;
c) to serve the needs of an adaptable, sustainable, knowledge-based economy at local, regional, and national levels;
d) to play a major part in shaping a democratic, civilized, inclusive society.

It is to achieve these ends that higher education has developed. These are common ideals, recognized throughout the world. To varying degrees, they provide the philosophical framework within which all institutions of higher education operate. The full or partial fulfillment of these objectives provides the essential *raison d'être* for universities, polytechnics, colleges, and other providers of higher education, and offers the backdrop against which all effective planning and management of higher education must take place.

1.2. WHAT IS STRATEGIC PLANNING?

Possibly the best definition of strategy was offered by Chandler, in his book on *Strategy and Structure*, written in 1962:

> the determination of the long-term goals and objectives of an enterprise and the adoption of courses of action and the allocation of resources necessary for carrying out these goals.

Here, a number of essential features of good planning are immediately apparent:

- a forward view
- establishment of targets
- development of means by which these targets may be realized
- direct relationship with resource allocation, having first identified the aims and objectives

A second, helpful definition of institutional planning, especially in the context of higher education, was offered by Lockwood and Davies, in 1985:

> the continuous and collective exercise of foresight in the integrated process of taking informed decisions in the future.

This definition introduces some further concepts, which underpin strategic planning and management:

- a *continuous* process, which is ongoing
- participation and agreement
- the exercise of *judgment*
- the *combination of different inputs* to develop a single outcome
- the use of good *information*
- clear outcomes and deliverables

All of these ideas and requirements will be discussed in more detail in the course of this handbook. The emphasis is on planning and management in a university or other institution of higher education, rather than at system level.

Strategic planning and management can take place at various levels within an institution:

- the whole institution
- the faculty
- the department or school
- the subject group or research group
- the individual

This handbook discusses planning at each of these levels and looks at the development of an effective planning culture throughout the organization.

1.3. THE NEED FOR PLANNING

The importance of effective planning and management within universities has increased in recent years. In some cases, this has coincided with erosion of Government direct control of higher education. For some members of the academic community, such developments have been unwelcome. Sometimes associated with administrative bureaucracy and erosion of academic freedom and self-determination, planning is now a central activity within universities that underpins the organization and delivery of teaching and research. Why is planning so important for the modern university?

Competitive Focus

Most universities and institutions of higher education now operate in a highly competitive environment. There is strong competition for student recruitment, for research funds, and for the best staff. Such competition is sometimes encouraged by governments and funding bodies. In these circumstances, individual universities need to assess their range of activity and to determine relative priorities. No single university can meet all the expectations of higher education and perform at the highest possible level in all fields. Planning forces a systematic analysis of the institution and its environment. A strategic plan provides a statement of what the university or organizational unit intends to do or do relatively more of and, either explicitly or implicitly, what it will not do or do relatively less of. Effective planning helps institutions to identify what makes them distinctive and what they have in common with other institutions, and therefore it helps them to maintain their individuality.

Pressure on Resources

Across the world, higher education faces pressure on resources and the need to justify expenditure. Reductions in the unit of resource and increasing emphasis on operational efficiency and value for money have placed a new weight on the selective allocation of resources within every university. Against this background, universities need to develop effective planning procedures in order to co-ordinate resource allocation, to resolve competing claims on resources, and to achieve the optimum use of scarce resources (including human resources and capital). The strategic plan should provide an agreed source of authority and justification for subsequent decision-making. Without such a plan, resource allocation will tend to be *ad hoc* and short-term in nature, commonly reflecting "who shouts loudest" or "who knows who" rather than considered judgment and the best long-term interests of the institution.

Accountability and Assessment

There has been a continuing move towards increased accountability in higher education at the institutional level and within universities. This trend reflects the need to account for the use of public funds and the attention now focused on quality of provision. Such accountability has required the development of plans in order to provide benchmarks and targets against which performance can be measured and assessed.

External Interaction

A strategic plan may form the basis for a formal relationship with outside bodies, including government and other funding bodies or may be helpful in fostering closer relations with other external bodies, including local or regional government, the local community and other groups, and organizations and individuals with which the university interacts. The plan provides a helpful form of information, able to communicate the aims, objectives, aspirations, and philosophy of the university, and in this way may strengthen external links and/or break down barriers.

Internal Management

Universities are now large, complex organizations. A strategic plan is a means to the creation of a corporate identity with a sense of common purpose bringing together all staff and students. By setting future direction and goals, it generates a sense of "stretch" and ambition within an institution. It provides a method of communicating the aims and objectives of the institution, many of which will have originated at senior management level, of developing an *esprit de corps* among staff, and of establishing overall institutional targets with which all staff will become familiar. At a lower level in the planning structure, departmental, group, and individual plans will provide a focus for activity with which all staff should be able to identify.

In summary, plans should be constructive and helpful, not obstructive; they should set out the way in which particular ends will be achieved. Plans may require difficult decisions, especially about relative priorities, but the desired outcome should always be beneficial and positive. A plan should be useful and should support the delivery of teaching and research; it is not an end in itself.

1.4. THE NEED FOR STRATEGIC PLANNING AND MANAGEMENT IN SOUTH EAST EUROPE

A recent report of UNESCO-CEPES (Vlăsceanu and Purser, 2002) describes the following characteristics of the policy-making process in the field of higher education in the countries and entities in South East Europe.

- Policy-making is usually located in the ministries of education, while the role of other stakeholders is very low.
- Policy-making is not built on reliable and valid data and information about the working of the system and its component institutions.
- Policy implementation does not provide for adequate mechanisms and procedures, and the same holds for policy monitoring and evaluation.
- The design of new policies in higher education does not take into consideration the changing environmental factors like emerging markets, political influences, legal constraints, etc.
- Competitive models and incentives (*e.g.*, the increasingly internalization of higher education) are not used or have a small significance in policy-making.

Against this background, many university leaders and academic staff in South East Europe hold the view that strategic planning and management are important, possibly key elements in the future development of higher education institutions. However, moves in this direction are hampered by many constraining factors. The UNESCO-CEPES report identified two distinct categories of constraints to effective planning and management: exogenous and endogenous.

Exogenous factors include:

- Legal and constitutional constraints that limit autonomy and flexibility, thus preventing institutions from developing their own independent operation and planning.
- Political influences arise from many different quarters and are often contradictory. Public opinion, interest groups, and lobbying and interventions by political leaders, parliamentarians, and policy makers are all sources of political influence which generate operational and managerial uncertainty in universities. Many key politicians are also academics.

- The agenda for strategic change is subject to various different interpretations of events and trends that are both national and international; the range of interpretations of the same event may vary both in time and space, so that establishment of a clear line of action is rather difficult.
- Higher education institutions are limited in number within any one state, normally less than ten. Commonly, one university holds a key position, being invested with many qualities as symbols of national pride. As a result, many concerns often focus on a single institution, making it difficult to concentrate effort and focus the strategy, and also creating difficulties for other institutions in the country.
- Too many ubiquitous stakeholders, mainly those with ranking positions, express their expectations and sometimes act as "owners" who impose their views on the ways activities should evolve in higher education institutions, views which are usually related to well established traditions.

In order to cope with the effects of such "environmental constraints", higher education institutions must be prepared to negotiate when embarking on strategy elaboration. Unfortunately, their skills and readiness to negotiate are rather limited, being influenced by the ways internal processes are carried out.

Endogenous factors affecting the process of strategic management within institutions include:

- There are too frequently many goals and often they are both vague and conflicting at the university level. This in-built ambiguity makes it difficult to identify current and future directions that are so important for managing a university strategically.
- When institutional autonomy is granted to both universities and faculties (and it is limited mainly in financial terms), university leaders and administrators have a weaker power base and less authority to

formulate a strategy and the institutional settings corresponding to it.

- For financial reasons, many academics are engaged in multiple employment, both in the same and in different universities. This situation makes it difficult not only to reach consensus on strategy points but also to avoid latent conflicts of interest.
- Timing has a specific cultural meaning in the region, as some will contend, and it is clear that the sense of urgency in the university setting is far from being commonly understood. This sense of urgency is enhanced by the periodicity of elections and the political instability they engender. They interrupt strategic planning and give rise to inertia. Agendas are permanently changed, newcomers bring new ideas and peer reviews are being permanently demanded. Incorporating all of these in a normal flow of work requires time and leads to considerable delays.
- Institutional incentives are more linked to individual performances and less to a better functioning of the university. Institutional fragmentation is so large and the actions of academics so centrifugal, that the elaboration of a university strategy is often postponed.

Exogenous and endogenous factors reinforce each other and inevitably lead to delays in the elaboration of plans for strategic management. When considering how the effects of the two categories of factors may be combined in order to generate a specific institutional strategy, it is possible to distinguish two approaches:

i) *The reactive approach* emphasizes either the passive posture with regard to local and international shifts of environment or the step-by-step actions which follow external changes.

ii) *The entrepreneurial approach* is focused on those changes which are based on the existing institutional strengths while putting forward new developments which show flexibility and rapid adaptation to environmental shifts.

The reactive approach seems to be dominant among the higher education institutions of South East Europe. One way by which it is concretized is through changes brought about one after the other, as successive reactions to external or internal pressures. Such changes are far from being consistent. Either they take different forms in different faculties of the university, or they are scattered in time. The other way is that of avoiding any institutional change. Passivity and inertia generate a reactive approach which in fact reveals a lack of strategic development. The entrepreneurial approach presupposes the elaboration of a proper strategy of institutional development which preserves the strengths and identifies those changes which make the institution more competitive.

In this context, the UNESCO-CEPES Programme has placed an emphasis on how to enable higher education institutions to construct entrepreneurial strategies in order for them to enhance their performances. Key objectives are to:

- establish close links between policy-making and institutional strategic development;
- outline the necessary techniques for both processes, particularly:
  - techniques for uncovering information;
  - techniques for setting policy and strategic priorities;
  - techniques for elaborating policy documents and strategies;
- provide incentives for the participants to commit themselves to working on policy and strategy.

1.5. SOME IMPORTANT REQUIREMENTS

Before looking in detail at planning structures and planning processes, it is important to establish some key principles that are important, especially in the context of higher education:

- The planning structure and process must be *cost-effective*. It is essential that the resources required, including staff and management information, but, especially the time of all those involved, is commensurate with the output. Excessive expenditure of time and effort for little practical output will rapidly undermine credibility in the planning process.
- Planning must be *timely*. It seeks both to respond to changing circumstances and to anticipate changes and developments in the future. The length of time taken before implementation and delivery must allow institutions to be able to act swiftly and strongly in response to opportunities that arise. Delays in the completion of plans and the consequent emergence of planning blight can have serious adverse consequences for the institution concerned.
- Planning should be *participatory*, allowing inputs from all interest groups within the institution. All staff and students should be able to identify a route by which their views can be contributed to the planning process.
- The process must be *managed*. Effective co-ordination of the planning structure and process is essential if plans are to be prepared, approved, implemented, and monitored according to an agreed time scale. Once a plan has been approved following due consultation and debate, implementation should be led by designated officers (Pro-Vice-Chancellors, Deans, or Heads of Department) or senior professional managers (Director of Finance, Director of Estates, Director of Human Resources).
- The process should be *non-intrusive* as far as possible, allowing staff and students to continue with their day-to-day activity.
- The planning process must be *transparent*. It must be clear to all concerned how decisions have been reached. Plans which have been prepared "behind closed doors" or which include decisions that cannot be openly

justified are unlikely to carry broad support within an institution.

- Above all, it is crucial that the planning process carry the *confidence* of all interested parties, both within and without the institution. Without such confidence, the process will have no value.

Chapter 2

Governments and Higher Education

2.1. THE SCOPE OF POLICY-MAKING

This handbook is primarily concerned with planning and management at the level of an institution of higher education and within that institution. However, the scope for planning will necessarily reflect the structure of higher education within national systems, including the extent of direct Government control. Given the importance of higher education in the development of a skilled workforce and the impact of universities on the economy and society, all Governments have a responsibility to oversee the provision of higher education. Detailed arrangements will vary between countries, reflecting history, political persuasion, and practical realities, but the outcome will have a direct impact upon the relationship between institution and state and will have a profound influence on the ability of universities to plan and manage their own affairs.

The governance system is one of the most actively debated aspects of higher education. There are essentially three models in existence:

i) the state control model;
ii) the state supervising model;
iii) the market-based model.

Inevitably, lines between these models can be blurred. Moreover, the position in individual countries can change over time.

2.2. THE STATE CONTROL MODEL

Historically, strong Government control has been a feature of higher education systems in many European states. Typically, the state (either national or federal) will "regulate the access conditions, the curriculum, the degree requirements, the examination systems, the appointment and remuneration of staff etc" (van Vught, 1994). At the same time, the academic community has often retained considerable authority and independence in the day-to-day running of internal affairs. Under this model, responsibility for strategic planning clearly rests with Government. Institutions are an instrument for the delivery of Government determined priorities. The role of institutional management is minimized. Funding of higher education, both teaching and research, is clearly a Government responsibility.

2.3. THE STATE SUPERVISORY MODEL

Increasingly, European countries are moving to a weaker form of state authority. Under the State Supervisory Model, individual universities have more freedom to determine their own futures, establishing their own priorities often with a more diversified funding base, both Government and private. Here, there is a much greater role for university presidents or vice-chancellors, for Deans and Heads of Department and for central institutional management. This approach is often referred to as "new managerialism" and is a feature of many areas of public service delivery at the end of the Twentieth Century. However, it is important to recognize that the Government retains oversight of the system, "steering at a distance". Such supervision may be exercised through the operation of quality assurance schemes for teaching and research; by the provision of policy guidance, possibly accompanied by incentives and penalties; and by the maintenance of accountability systems. Under this model, institutions have a clear responsibility to plan and manage their own affairs. Funding will often be more diverse, tapping both Government and private sources. In some areas of activity, institutions may find themselves working in a market-based environment, either a free market or a controlled market.

2.4. THE MARKET-BASED MODEL

Under a Market-Based Model, Government does not fulfil either an active or an interventionist role. Institutions develop programmes of teaching and research based on market demands. The emergence of private universities in many European countries is based on competition for student recruitment and research. Direct Government funding is minimal, even if Government may still be a "consumer", for example, as a sponsor of research. Tuition is funded primarily through fees paid by students. Under this model, like the State Supervisory Model, there is a strong emphasis on planning and management at the institutional level. Universities are free from constraints regarding income and expenditure, but equally are subject to the pressures of business; in particular, the state does not offer any financial "safety net" in the event of losses.

2.5. THE IMPACT ON INSTITUTIONAL MANAGEMENT

These different models will have a significant impact on the scope for institutions to plan and manage their own affairs. McDaniel (1996) identifies five key areas in which the relationship with Government will impact upon institutional management:

- finance, *e.g.*, the kind of government funding (earmarked or otherwise) or the right to borrow money on the capital market);
- general aspects of management, *e.g.*, the freedom to conclude contracts and the legal position of universities;
- educational matters, *e.g.*, development of new subject areas, decision-making powers on curricula, content of courses and quality assessment;
- personnel policy, *e.g.*, the appointment and reward of staff;
- student affairs, *e.g.*, access criteria and tuition fees.

2.6. NEW MANAGERIALISM

Reference has already been made to the emergence of "new managerialism", which became a dominant force in higher education in Europe and in other industrial and developed countries in the 1990s. New managerialism combines a significant level of procedural freedom for institutions, especially in financial administration and management, with active oversight of educational and research affairs by Government. There is no single model of new managerialism. Different Governments have varied in their desire to decentralize decision-making powers, the degree of autonomy allowed to administrative agencies, and their commitment to market mechanisms. Certain reforms have been radical and all-embracing, others have been more pragmatic or evolutionary. However, there are some common characteristics:

- strengthening of the administrative and leadership functions within institutions;
- priority setting, by Government and within institutions, including the contractualization of Government-university relations, the assessment of targets and outputs, and the use of performance indicators;
- client-orientation, including a new focus on quality for both students and research sponsors and on marketing;
- value-for-money, with an increasing emphasis on cost and returns. Central to the delivery of higher education under these circumstances is the development and operation of effective systems of planning and management within all institutions of higher education.

2.7. THE SITUATION IN SOUTH EAST EUROPE

Changing relationships between Government and institutions of higher education are clearly exemplified in South East Europe and have helped to shape the present nature of planning and management in universities throughout the region.

Figure 1. Three models of higher education in Central and Eastern Europe

	PRE-COMMUNIST: Implicit and self-regulatory	COMMUNIST: Centrally-regulated	POST-COMMUNIST: Explicit and self-regulatory
Main traits	Confidence in values, in particular academic freedom	Aims, tasks, and resources in teaching and research defined by the Communist Party and allocated by the State	Competition for students, funding; importance of institutional and programme academic standing; multiple forms of self-representation; adherence to academic freedom
System-wide regulation	Minimal	Compulsory and detailed party/state regulation	Preferably within a broad State regulatory role
Planning/ system approach	None or very limited	Comprehensive: an instrument of political control	Particularly important at institutional level
Accountability	Limited mainly to own constituency	Mainly to political authorities (Communist Party)	Accountability to multiple constituencies
Autonomy	Yes, but its parameters were differently defined than nowadays	Hardly any or at the discretion of the political authorities	Determined by the degree of accountability to specific constituencies
Incentives	Reliance on intrinsic motivation in learning and research	Achievement of goals set by the party and the state	Well-being of the institution and of its principal constituency
Financing and budgeting	Heavily tuition-fee dependent/input-oriented line-item budgeting	Totally state-dependent but relatively "worry-free"; rigid line-item budgeting	Multiple sources and instruments of financing and budgeting
Relation to Labour market	Minimal and only indirect	Close co-ordination with state-set manpower planning	Significant but indirect; a result of interaction of multiple constituencies
Internal governance and structure	Federation of relatively independent sub-units (Chairs)	Externally determined and politically controlled	Concentration of administrative power/ Diversity of structure
Strategic planning	Occasionally at sub-unit level, not essential for governance	Almost none at institutional and sub-unit level	Essential for survival and well-being of the institution. Important approach in governance

(*Source:* Sadlak, 1995)

Universities in the region have a long history, in many cases predating the communist period. Half of a century of

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communist government, followed by a period of complex, difficult and painful transition, marked them deeply and accounts for the policies they developed in the attempt to reflect the new social and political conditions. In 1995, Sadlak conceptualized these transitions in an analytical framework that distinguishes three general models of higher education: pre-communist, communist, and post-communist. The framework is especially important in that it highlights the general characteristics of higher education in the region, relevant to the role and significance of governance and strategic management in the present, post-communist, and post-conflict periods. Although originally devised with a view to Central and East-European countries, Sadlak's framework fits well the states, entities and communities throughout South East Europe.

2.8. RECONSTRUCTING THE SYSTEMS OF HIGHER EDUCATION IN SOUTH EAST EUROPE

The extension of strategic planning and management in the universities of South East Europe is part of a larger effort to reconstruct the systems of higher education in newly emerged states, entities, and communities. Some of the main characteristics of the process are set out below (adapted from Scott, 2000):

- The reconstruction consists of changes on a scale and at speed never attempted in other parts of Europe. New policies are being developed and implemented in a very short period.
- In some places, reconstruction has to be total: the legal framework in which universities operate, as well as their mission and articulation within wider systems, has to be reconsidered.
- The diversity across the region is immense and therefore no standard solutions can be applied. For example, in some places it is necessary to strengthen the university at the expense of their faculties or other constituent

parts, while in other places, decentralization of the decision-making process is necessary.

- Staffing is a major issue. The level and appropriateness of skills and qualifications and the mechanisms for renewing the staffing base are central concerns for most universities and higher education systems.
- The chronic under-financing of higher education is of utmost importance. Universities have passed through the transition period with fierce financial constraints.
- The academic and the administrative management of universities are not separated. Most of the university managers are elected, and sometimes huge collective bodies (Senates, Academic Councils, etc.) are involved in taking decisions. This situation contributes to a largely unclear distinction between executive decisions and policy-making.
- The higher education systems now face new challenges including the development of a significant private sector (which looks to be more dynamic and flexible) and the increasing role of research in universities. In some Central and East-European countries, this process was accompanied by the integration of the institutes managed separately by the Academies of Science. This, therefore, is the background against which planning and management in higher education must operate.

Chapter 3

Structure and Process

3.1. THE PLANNING STRUCTURE

The internal planning structure of a university should operate at various levels within the institution. It will be all-pervasive, affecting every area of activity and impacting upon every student and every member of staff. The three key levels of planning may be summarized as follows:

- Mission Statement
- Strategic Plan
- Operational Plans

The Mission Statement

The starting point in any planning process is the *Mission Statement.* This should describe briefly the key characteristics of the university and should encapsulate the essential philosophy and *raison d'être* of the institution. The description might include whether the university sees itself primarily as:

- international, national, regional, or local in focus;
- teaching-based or research-based;
- broadly based in subject terms or more specialized.

The Statement may also refer to broad social or economic aspirations, such as the commitment to increasing educational opportunities or the creation of wealth through research, innovation and technology transfer.

The Mission Statement is intended to set the overall tone and general direction of the university for a reasonable period, probably no less than five years. It should not be necessary to update a Mission Statement on a regular basis.

The Strategic or Corporate Plan

The *Strategic Plan* sets out the overall aims and objectives of the *whole* university. It will include a broad analysis of the context within which the university is operating and will set out aims and objectives by academic subject area or by activity (such as admissions, teaching, research, staffing, or estates).

The Strategic Plan is commonly a public document, often available for consultation by external stakeholders. It may also be the basis of a formal relationship with government or funding bodies.

The Strategic Plan is a key document which in effect translates the mission statement into a set of aims and objectives covering the whole university. It introduces an element of analysis and prioritization and should provide a central point of reference from which all the more detailed operational planning and activity should stem. In normal circumstances, the objectives set in the Strategic Plan should be reviewed on a regular basis, probably annually, and the whole Plan should be subject to full review on a regular cycle, possibly every three years. It is unlikely that a Strategic Plan will remain valid for more than five years, such is the pace of change in the external environment.

The Strategic Plan should bring together planning, resource allocation, and accountability within a single integrated, corporate process linking academic, financial, and physical aspects. Thus, a Strategic Plan should provide a link between academic planning (such as student numbers, courses, and research), financial planning (projected income and expenditure), and physical planning (buildings and infrastructure), and will also guide the overall allocation of funds within the university.

Operational Plans

In order to translate the broad aims and objectives of the Strategic Plan into more detailed working plans, it is necessary to develop a series of *Operational Plans*. These may be *academic subject based*, covering a particular Faculty, School, or Department, or may be *theme based*, covering matters such as research, teaching and learning, estates, or human resources. In many cases, both will be required.

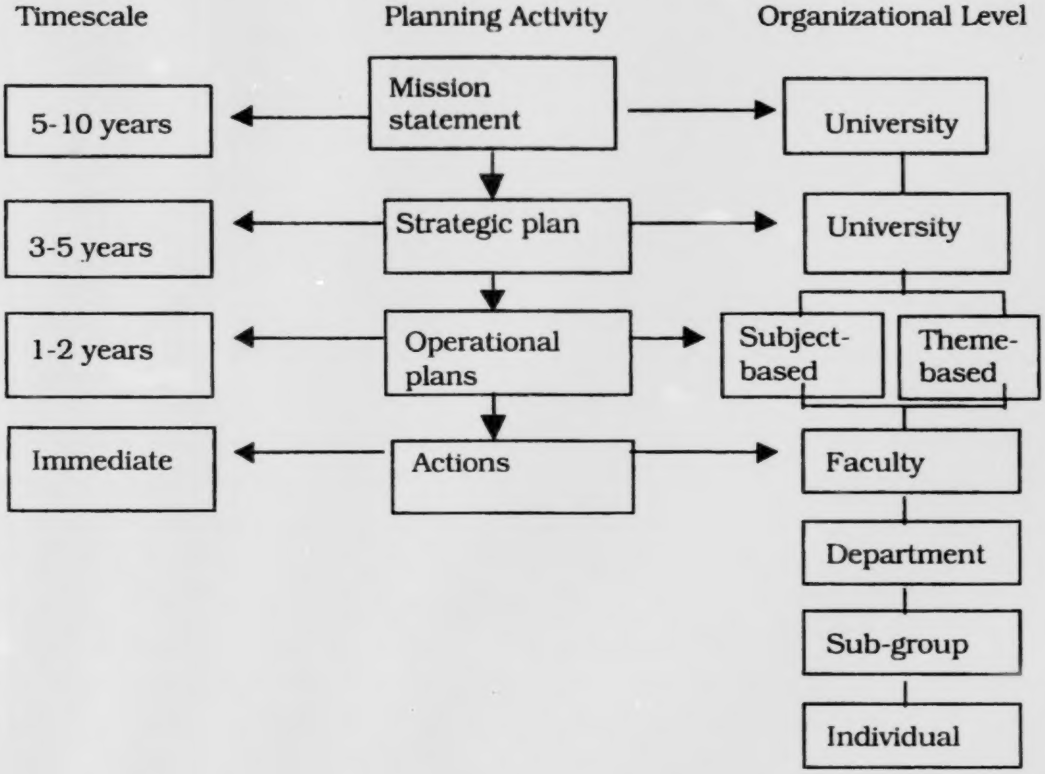
Operational Plans will include objectives and targets specific to particular organizational units and activities. They will normally cover a period of 3-5 years, but will be reviewed and updated on an annual basis in the light of achievement and changing circumstances. They will be directly related with resource allocation and will include many key measurable inputs and outputs such as student numbers by course or method of study, development of new facilities, and research income.

This level of planning may be regarded as tactical planning. The Operational Plans show how the university is responding to the broad objectives set out in the Strategic Plan. These will be practical working documents referred to by staff on a regular basis. They may also be confidential in nature since they will include material indicating the ways in which the institution is seeking to gain advantage over its competitors.

Operational Plans may exist at various levels and sub-levels. Thus, within a particular Faculty, plans may be required at departmental level; within a department, plans may be needed at the level of a research group or teaching unit. Indeed, this philosophy of planning may be applied down to the level of each individual member of staff.

This structure may be summarized as follows:

Figure 2. The structure of organizational plans.


Timescale
Planning Activity
Organizational Level
5-10 years
3-5 years
1-2 years
Immediate
Mission statement
Strategic plan
Operational plans
Actions
University
University
Subject-based
Theme-based
Faculty
Department
Sub-group
Individual

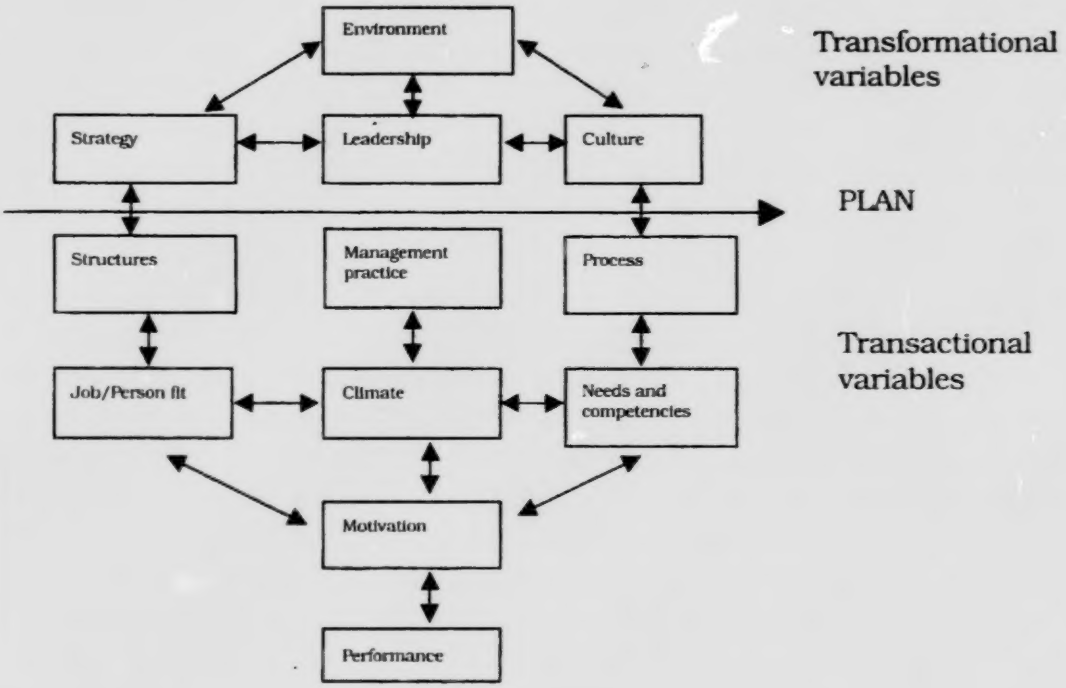
3.2. STRATEGIC PLANNING : THE THEORETICAL BASE

Planning in higher education is a very practical exercise. Nevertheless, it is important to understand some management theory, since this will help to identify key issues and constraints.

There are several important points that emerge from the Burke-Litvin model:

- The process begins with a detailed analysis and understanding of the working environment, both internal and external;
- All three transformational variables must be met in the preparation of a plan;
- The whole system must work in parallel and in harmony;
- Human factors are crucial in successful planning and implementation.

Figure 3. The long-standing, but still valuable, model of strategic planning, as offered by Burke and Litvin


Environment
Transformational variables
Strategy
Leadership
Culture
PLAN
Structures
Management practice
Process
Transactional variables
Job/Person fit
Climate
Needs and competencies
Motivation
Performance

Much has been written about strategy in organizations. For higher education, there are perhaps three key aspects:

- Simple, consistent long-term goals;
- Profound understanding of the competitive and working environment, including the needs of students and other "consumers" of services;
- An objective appraisal of resources.

In the 1960s, Michael Porter and others argued for an "outside-in" approach to strategy, based on a detailed assessment of context and environment and response to competitive forces. This commonly used the familiar SWOT analysis:

- Strengths
- Weaknesses
- Opportunities
- Threats

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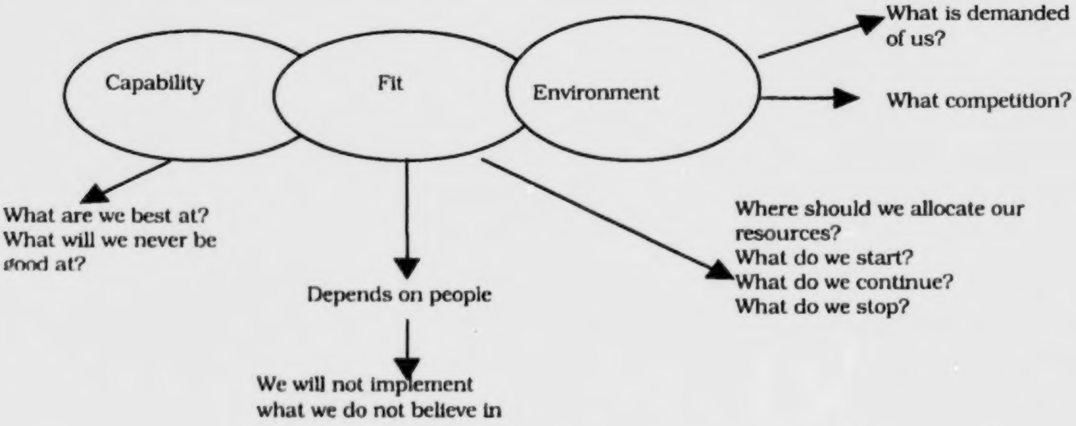
In the 1980s, Gary Hamel and others argued for an "inside-out" approach, which built on and exploited the core competencies of the organization, building on strengths and growing from within.

In practice, a combination of both approaches is needed. Strategy, therefore, is about delivering best fit between organizational capabilities and environmental demands and opportunities:

Figure 4. Organizational capabilities *versus* environmental demands


Capability
Fit
Environment
What is demanded of us?
What competition?
What are we best at? What will we never be good at?
Depends on people
We will not implement what we do not believe in
Where should we allocate our resources?
What do we start?
What do we continue?
What do we stop?

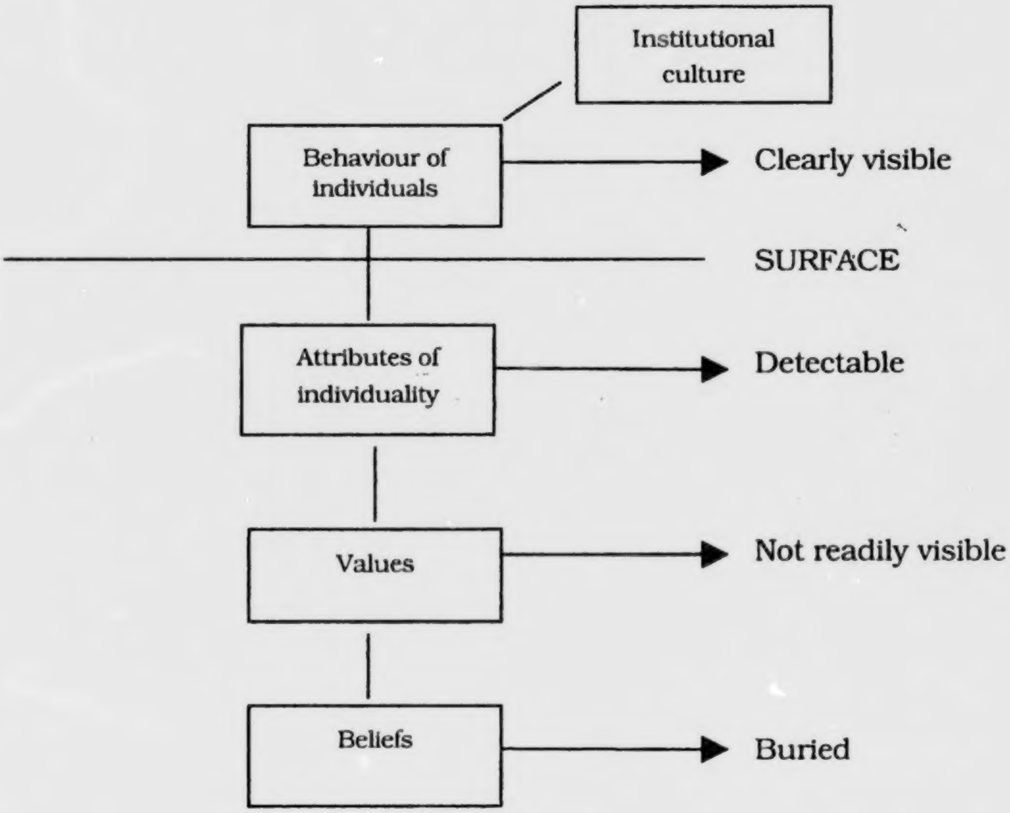
The emphasis here is on implementation. Structures and resources are needed to implement a plan: Without such support, a plan becomes impossible. Gary Hamel wrote, "a competent strategy well executed is of more use than a brilliant strategy badly (or not) executed. Our problem is strategy execution, not strategizing."

This problem is a familiar one in higher education. Commonly, much effort is deployed in the development of plans; much less in ensuring effective implementation. Important factors in planning are therefore effective *leadership* and an awareness of institutional *culture*, including an appreciation of the core values of the organization.

Leadership must be informed and focused, but also sensitive to the environment; leadership must also create new opportunities as well as reacting to changing circumstances.

Institutional culture has been defined as "the set of attributes, values and beliefs which guide behaviour in the absence of direct instruction." In practice, culture is often more difficult to grasp than may initially appear to be the case:

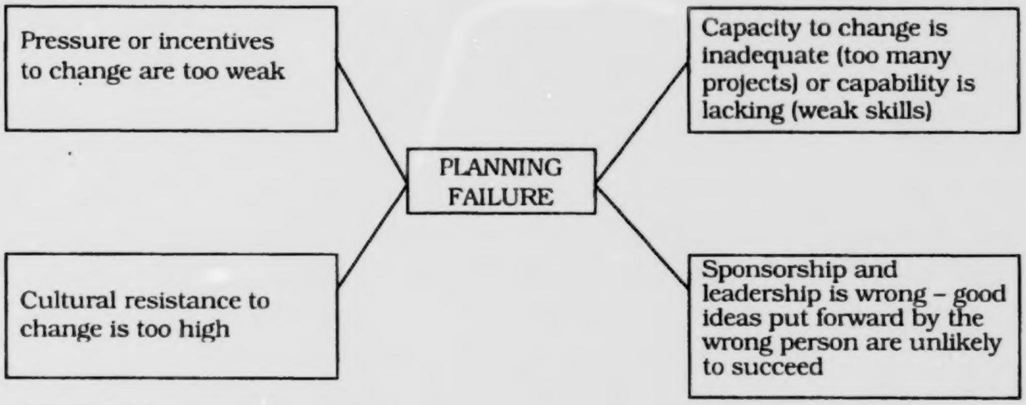
Figure 5. The definition of institutional culture


Institutional culture
Behaviour of individuals
Clearly visible
SURFACE
Attributes of individuality
Detectable
Values
Not readily visible
Beliefs
Buried

It is necessary to look beneath the surface in order to understand the culture of the organization. Universities and institutions of higher education are no different from other organizations in this respect.

Once a plan has been developed, adequate resources, especially human resources, are crucial. Skills are needed to equip individuals to deliver those parts of the plan for which they are responsible. Effective change management is vital within any planning process.

Figure 6. The four reasons for which change programmes fail


Pressure or incentives to change are too weak
Capacity to change is inadequate (too many projects) or capability is lacking (weak skills)
PLANNING FAILURE
Cultural resistance to change is too high
Sponsorship and leadership is wrong – good ideas put forward by the wrong person are unlikely to succeed

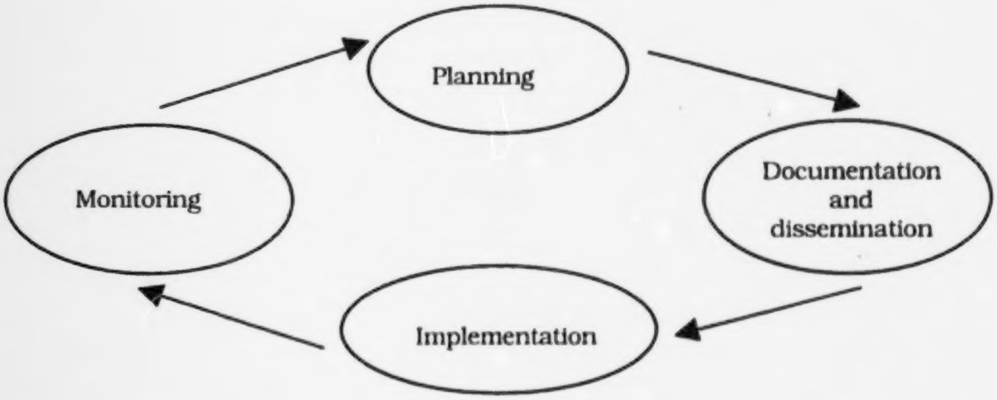
3.3. THE PLANNING PROCESS (Based on and adapted from HEFCE 2000)

Strategic planning is that part of the strategic management process which is concerned with identifying the long-term direction of the institution. It is a continuous, cyclical activity with four main phases:

i) *Planning* – doing research on and analyzing strategy and plans, and generating ideas and choices.
ii) *Documentation and dissemination* – preparing the plan and making it available to all interested parties.
iii) *Implementation* – taking action to achieve the agreed aims.
iv) *Monitoring* – assessment of achievement or non-achievement, in order to influence and shape future strategy.

Some institutions set out these phases in detail in *a formal timetable.* This provides an element of discipline for all concerned, helps to embed an awareness of planning within the institution, and tends to strengthen communication, expectation, and consultation. Other institutions will develop timetables on a more *ad hoc*, pragmatic basis, depending on the stage in the cycle reached. This way of proceeding can allow the process to be accelerated or delayed according to need. An excessively mechanistic approach may stifle creativity and may provide an obstacle to flexibility and opportunities. On the other hand, a planning system, which is too *ad hoc* and which changes its timetable and requirements too often, can lead to instability, a lack of confidence, and a failure to develop any corporate memory and expertise. A balance is needed, which provides both routine and rigour, but which is also always open to the generation of ideas and choice.

Figure 7. The four main phases of strategic planning



One of the keys to effective planning is *flexibility*. It may seem like a paradox, given the need for priorities and decision-making, but an important aspect of planning, at least in the field of higher education, is *keeping options open*. It must be recognized that the long-term objectives of the institution may not be achieved exactly as stated, because unforeseen changes in the internal and external environment are inevitable and may require the objectives to be revised. There is no virtue in sticking doggedly to a plan that has been overtaken by events. All institutions must retain the flexibility to adjust as circumstances change, so that they can exploit unexpected opportunities that arise and respond to unforeseen threats. Consequently, there needs to be frequent review of the overall direction to take account of and adjust to actual and potential changes to the organization or its environment.

It is important that all four elements of the planning process are completed. All too often in the past, universities have developed plans but then have not seen them through, sometimes developing resource allocation models which run counter to the priorities identified in the plan, by failures to communicate the plans effectively to those expected to deliver required outputs or by inadequate monitoring which has meant that progress cannot be measured, and there is poor feedback to inform future planning exercises.

3.4. WHO PLANS?

Ultimate responsibility for planning in an institution must rest with the governing body. In many countries, this will be the University Council or the Board of Governors. Elsewhere, in countries where universities have less independence from the state, governments (either national or regional) may have a direct role in institutional planning. Whatever the constitutional position, it is essential that there be a body within the institution able to exercise oversight of the planning process and able to take ownership of the strategic plan of the institution and be able to present the views of the institution to external authorities.

There are various ways in which this responsibility for institutional strategic planning might be exercised:

- Some institutions delegate much of the work to a planning and resources committee comprising a small number of lay governors (individuals not employed by the institution, normally from business or with other professional experience), senior managers (both academic and administrative), and the operational head of the institution or chief executive (Vice-Chancellor, Principal, President, or Rector) who will normally chair the committee. The governing body then tends to ratify the strategic planning recommended by that committee.

- In some universities, senior managers may prepare the draft strategic plan and discuss it with governors during governing body or committee meetings before seeking approval. The governing body might commonly have an "away day" meeting to concentrate exclusively on strategic planning.
- Some universities use informal, limited lifetime *ad hoc* groups including senior managers and active governors to prepare the strategic plan.

The involvement of Council members or governors from outside the institution can have advantages (an external perspective and particular expertise) but may also have disadvantages (lack of detailed knowledge of the institution or of the higher education context, practical problems of availability).

The head of the institution or chief executive has a leading role in the planning process, influential in shaping the overall direction of the institution and taking either a substantive or symbolic lead in each of the key steps of the process. There are four main tasks within the role of the chief executive as a planner:

- envisioning
- consulting
- challenging
- communicating

The chief executive may be relatively less involved at the stage of implementation, but will need to have oversight of monitoring.

Increasingly, in higher education institutions throughout the world, the chief executive sets out a long-term vision for the institution. Often this activity forms part of their initial appointment or is undertaken soon after appointment, and may be linked with structural and organizational changes. For some observers, this forms part of new managerialism in higher education and a departure from academic self-government. To others, such changes indicate a new professionalism in response to changes in the working environment.

In practice, much of the main workload for strategic planning normally rests with a central planning committee. This body normally includes the Chief Executive and other senior academic officers, but the remaining membership may be either *elected* (normally, from the academic community) or *representative* (normally, Deans or holders of similar positions). Elected membership can be helpful in securing acceptance of plans, but representative membership, especially when such individuals are also budget holders or involved in resource allocation, can be helpful in ensuring effective implementation. In whatever way the membership is determined, it is important to ensure:

- a broad spread of expertise and subject backgrounds;
- a balance between continuity of expertise and fresh thinking (normally achieved by rolling periods of membership);
- involvement of support services as well as academic staff;
- that all members approach their task from an institutional rather than from a narrow sectoral point of view; there is a fine, but crucial, line between covering key areas of expertise and having members who only "fight for their own corner".

This committee has a central function within the planning process, providing the essential integration which brings together a diverse range of inputs, views, and information in order to produce a single, consistent plan. It may use small groups or specialist inputs and may operate in different ways, but it must provide the single focal point for planning within the institution.

Many institutions now have a senior Planning Officer or Director of Planning responsible for co-ordinating the whole planning process. This creates a body of knowledge and professional expertise and offers continuity in planning.

At lower levels within the organization, the preparation of operational plans is likely to be the responsibility of strategy committees, such as a Research Committee or a Teaching Committee. Similarly, planning committees will be needed in individual Faculties and Departments. Membership should include the relevant Dean or Head of Department and should be broadly representative of interest groups within the organizational unit concerned.

3.5. KEY POINTS

There are a number of key points within the planning process which are especially relevant in South East Europe:

- *An inclusive approach*: A salient feature of the new approach should be a constant emphasis on inclusivity in decision-making, including the Senate, the Executive Management, the Trade Unions, the Students' Unions, etc.
- *Creating "win-win" solutions*: Another feature of the process is to create "win-win" solutions. Through continuous talks and deliberations, participants can learn how to craft solutions which could achieve the minimum expectations of different stakeholders, but which could also take the body politic with them.
- *The importance of expertise*: The process of preparing the strategic plan can be strongly supported by knowledge and information on similar processes internationally and nationally.
- *Creating trust through fairness and integrity*: One of the most important features of the transformation process is the creation of trust through fairness and integrity. One of the most effective means is to involve representatives of the main interested groups in the university.
- *Create new structures and involve existing ones*: The constant involvement of the Senate and other University Boards is of the utmost importance. At times it is also

necessary to appoint task teams and sub-committees to attend to specific tasks or issues.

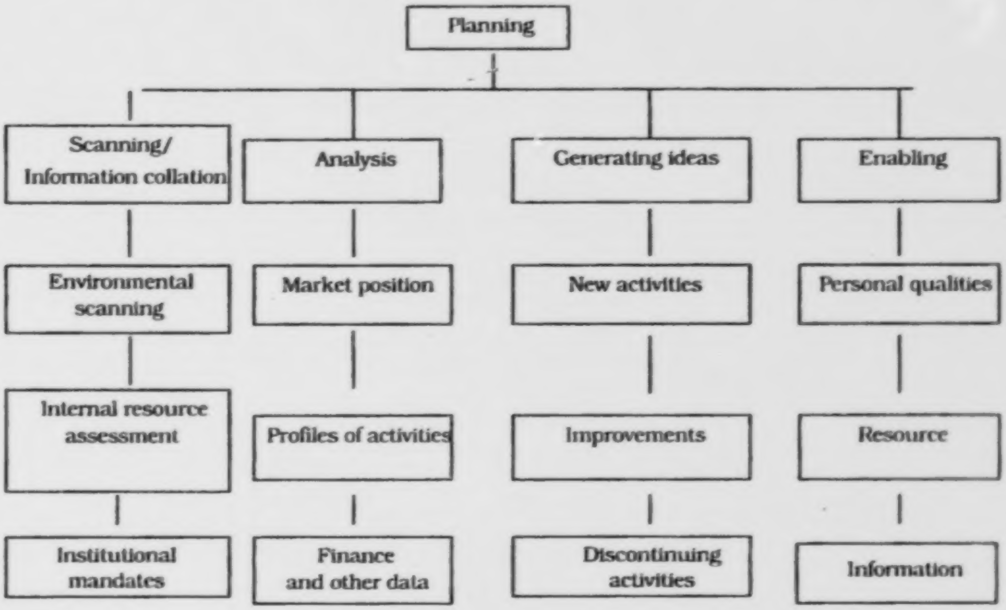
- *The outcomes*: The process of strategic planning should render significant and clear outcomes: formulation of new strategic priorities as part of continued strategic planning; establishment of a system of portfolio committees such as strategic planning, education and research (with sub-committees on teaching, research programmes, quality assurance), sustainable human development; resources (sub-committee on human resources, financial resources, infrastructure) spatial planning and information technology, access, recruitment and selection, diversity; decentralization of decision-making regarding finances, general and faculty regulations, etc.

Chapter 4

How to Plan[1]

4.1. PLANNING

The planning process is essentially one of information gathering, analysis, and discussion. There are four elements within this process: "scanning" or information collation, "analyzing", "generating ideas", and "enabling".


Planning
Scanning/ Information collation
Analysis
Generating ideas
Enabling
Environmental scanning
Market position
New activities
Personal qualities
Internal resource assessment
Profiles of activities
Improvements
Resource
Institutional mandates
Finance and other data
Discontinuing activities
Information

i) *Scanning*, or the accumulation of information, is the process of identifying and observing characteristics and changes which will have an impact on the organization. It involves reviewing the external environment, analyzing internal strengths and weaknesses, and identifying institutional mandates.

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[1] Based on and adapted from HEFCE, 2000

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Environmental scanning will include:

- Changes, known or anticipated, in Government policy affecting higher education (*e.g.*, changes in student numbers; need to increase certain subject areas, such as medicine or technology; social change, such as need for wider participation; projected changes in funding methodology or levels of funding).
- Economic change (*e.g.*, areas of expansion or decline which might affect demand for graduates from employers or need for research). Such changes may be local, regional, national or international.
- Social change (*e.g.*, demographic analysis, growth in numbers of school students, changes in levels of participation by different socio-economic or ethnic groups).
- Changing expectations of higher education within society (*e.g.*, development of concepts such as lifelong learning, contribution to the economy).
- Changes in technology that might affect the organization and delivery of higher education (*e.g.*, new methods of learning, new methods for development, analysis and presentation of information).

Potentially, there is a huge amount of information to be gathered. In practice, much is likely to come from Government in the way of broad policy steering and expressed priorities or clear directives to the higher education providers. Planning commonly involves the interpretation of such guidance and its translation into the more specific context of a particular institution.

The *internal assessment of resources* seeks to ensure that, in taking forward the planning process, the institution actually knows and understands the position from which it is starting in terms of resources available and can project forward the resources likely to be available in the future. Such assessment is essential to ensure that a subsequent plan is financially viable and is therefore deliverable.

- Overall analysis of income (by source and activity) and expenditure (by activity) over a period of not less than five years showing the financial position of the institution on an annual basis (surplus, break-even or loss) and the accumulated position. This analysis should also include financial reserves and investments. Such analysis is essential to provide the financial background to the exercise. Is the institution breaking even? Is there a deficit to be recovered? Are funds available for new investment?
- This broad analysis is an absolute minimum requirement to inform the planning process. However, what is also desirable but much more difficult to achieve, is analysis at the level of particular activities. The extent to which universities have the capacity to understand income and expenditure or to analyze costs at the level of individual faculties, departments, or services varies widely. The identification, apportionment and awareness of indirect costs is a particular difficulty. Ideally, those involved in the planning process will have some knowledge of which parts of the institution are in surplus, at break-even, or in deficit. Effective planning requires the institution overall to be breaking even or in surplus, at least over the long term, and requires a detailed appreciation of deficits in the short-term with operational plans that work towards correcting the deficit. Within the institution, it is not necessarily the case that each organizational unit must break-even or reach surplus. However, the planner must still have an understanding of the position of particular parts of

the university. Without such understanding the planning process will be ill-equipped to exploit opportunities and may perpetuate or intensify funding difficulties; moreover, the detailed assessment of resources at this level of activity is likely, in the end, to command internal respect and hence enhance the acceptability and implementation of the plan, including, where necessary, cross subsidization between different areas of activity.

- An inventory of staff resources and skills, preferably informed by a staffing database, which identifies gaps in expertise necessary to be filled in order to meet strategic aims, and which shows gaps likely to arise in the future. The ability to project staff vacancies through normal retirements and to project normal turnover of staff is vital for human resource planning and has a huge impact on the overall strategic planning process.
- A survey of the estate and other physical resources to assess capacity, especially if the needs of expansion are to be accommodated. At the minimum, this survey should provide a register of buildings, land and other capital assets. However, it will also, ideally give some indication of condition (Will major refurbishment be needed in the planning period?) and utilization (Are lecture theaters and teaching laboratories fully occupied?).
- An assessment of the capacity of academic and management information systems to cope with changes to or growth in activity. The importance of information technology in modern higher education and its necessary infrastructure, especially hardware and networking capacity, mean that information systems are vital. Informed technical advice and guidance about projected

usage and demand is now vital contextual information within the planning process.

- An awareness of value for money in order to identify scope for the better use of resources, allowing resources to be moved around in order to meet changing corporate objectives. Flexibility in the use of resources, including space and support services, is always helpful in the planning process.
- The capacity to undertake modelling is now vital in the planning activity. This information is not simply stored and reproduced. Rather, it is important to have the ability to ask "what if" questions. If one factor changes, what will be the impact on other factors. This facility is a necessary tool in achieving a planning system which is both questioning and challenging in its approach but which also takes care to assess the impact of its proposals and decisions.

Institutional mandates provide the final component of the scanning activity. In providing the basic core of information from which planning will take place, an important and very necessary starting point is what the institution has said before. Existing aims and aspirations (internal mandates) may set out core activities or values to be respected in the planning process. The legislative framework within higher education, especially its relationship to Government and funding bodies, and the constitutional instruments established for each institution (external mandates) represent an operational context which must guide participants in the planning exercise.

ii) *Analysis* of data and contextual information is an extremely important part of the planning process. With the emergence of new management information systems and the ready availability of a wide range of policy documents, there is a real danger of information overload for those involved in the planning of higher education. This potential problem has placed a particular emphasis on the proper analysis of information and the presentation of findings in an easily digested and understood format.

Analysis of *market position* seeks to locate the institution against benchmark competitors, using publicly available data or specially generated data. It requires managers to identify those other institutions with which the institution realistically compares now and also to identify institutions with which the institution aspires to be comparable.

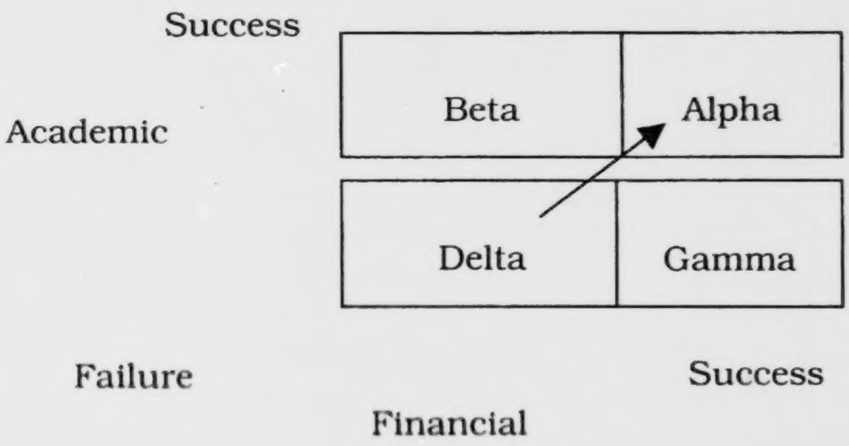
At a very basic level, analysis of market position is about knowing how well the institution is performing compared with others. Factors considered might include numbers of applications received, quality of students admitted, progression to final qualifications, employability of graduates, and levels of research income. The precise measures, or *performance indicators*, will vary according to the mission and character of the institution. However, *benchmarking* represents a rather more sophisticated approach, based on direct comparison with other specific institutions. This process can be conducted within or across national systems. Commonly, the performance indicators used will be financial in origin (expenditure per student, expenditure per member of staff, research income per member of staff) and may offer a valuable tool to assist in understanding in which areas an institution is performing relatively well or relatively poorly. Benchmarking can also be used to compare processes within institutions, sometimes through the emergence of benchmarking "clubs" where a number of institutions agree to share information on how particular tasks and activities are performed, the aim being to identify and share best practice and value for money. Benchmarking can be a valuable methodology and provides a helpful insight for planning. It is important, however, that such comparisons be used with care. No two universities are exactly alike in the content of their courses and their teaching arrangements, in their research activities, and in their detailed organizational arrangements. Moreover, benchmarking can lead to special pleading on the part of those who can point out apparently better levels of funding elsewhere rather than considered judgment on the basis of internal assessment of needs.

A second common tool within the planning process is the preparation of a *portfolio analysis*. The precise formality of such analysis may vary, but the aim is to identify the least and most successful areas of provision and to reflect such information in the final strategy. Portfolio analysis of teaching programmes can be undertaken by preparing a schedule of current courses and assessing each against agreed criteria. These might include student demand, quality of intake, employability of students, and cost per student. A simple ranking can be produced:

> *Alpha:* Consistently successful in academic and financial terms. These programmes would normally continue as a part of the core strategy.
>
> *Beta:* Successful academically, but not financially. This result may reflect poor recruitment or high costs. These factors need to be assessed and tackled. From an overall institutional position, it is legitimate to maintain such courses and to accept the financial burden. Such courses may also be justified in the context of the institutional mission. They will require cross-subsidization, which may cause friction within institutions, but this can be tempered if the process is transparent and has clear rationale.
>
> *Gamma:* Successful financially, but not academically. Again, it is necessary to understand the reasons for this situation. Academic weakness may reflect under investment; in which case,

correction of the problem may adversely affect the financial position. If this is not the case, there may be a temptation to run the course in order to generate income which can support other activities. However, the toleration of courses which are weak in academic terms is a very questionable approach in higher education and may cast doubts on the academic reputation of the institution.

Delta: Consistently unsuccessful in both academic and financial terms. These courses require urgent consideration and if the problems cannot be corrected, those courses must be ended. Doing so may release resources for other purposes.



Portfolio analysis can be very illuminating and may also be used to assess other areas of activity such as research, commercial ventures, overseas activities, and the provision of services and facilities. It requires clear criteria for assessment and an objective, honest approach by those undertaking the assessment. It may be seen as threatening to some parties, and it is essential that both the process and actions arising as a result are agreed upon in advance.

Finally, the planning process must be supported by the analysis of a wide range of *financial and other data*. The amount of data that can be usefully collected and analyzed varies between universities and most institutions will need to identify those most relevant to their particular mission. The key is to ensure that such data are maintained and are clearly understood by those concerned. The data will almost certainly be more meaningful if they are analyzed over time (trend analysis) rather than at one point (a snapshot) and if they are used on a comparative basis, either within the institution or with other institutions or the sector as a whole.

iii) Generating ideas. Ideas can be divided into three categories:

- undertaking new activities;
- making improvements to existing activities;
- withdrawing from existing activities.

New activities can be identified as part of the environmental analysis. It is important to recognize changing patterns of student demand; for example, in recent years, there has been growing demand for courses in subjects such as Computing and Management. If the market is felt to be of sufficient size and duration, the institution might decide to invest in one or more new activities. A crucial aspect of planning, although a slightly risky area of activity, is the attempt to "spot winners" in the future and to anticipate growth subjects which have yet to appear in observable demand. Similar issues arise in research, as the changing needs of society and the economy create new demand for knowledge. Early identification of new areas of activity and subsequent investment can give an institution a crucial competitive advantage, especially in staff recruitment and infrastructure. Resource analysis may also show areas where present resources are being underutilized. Underutilization is often apparent in the analysis of capital resources, like the use of buildings and land in the evenings, on weekends, and during vacation periods. Many ideas will emerge as part of this process of information gathering, analysis, and comparison. It is often helpful to involve staff at all levels in order to stimulate original, radical thinking and ideas, and to encourage participation within the planning process. Ideas for new courses or new research can emerge at all levels in the institutions. Similarly, an external view can also be helpful, possibly from lay members of the governing body, from outside partners (*e.g.*, sponsors of research or employers of students), or from consultants. It is important that the generation of ideas for new activity is both

- top down (led by senior members of staff) and
- bottom up (involving staff and stakeholders at all levels).

Ideas developed as part of the planning process must be tested and analyzed. New activity is essential to the vitality of higher education in general and is crucial for institutional development. At the same time, however, it must be recognized that there are risks involved. Anticipated expansion in student demand or research activity may not be forthcoming. Some formal process for risk analysis is required which involves an assessment of income and expenditure at different levels of activity (What would the effect be if only half the anticipated increase in demand was forthcoming?) Risk analysis also needs to take account of more subjective implications, such as loss of reputation and knock-on consequences for other areas of activity.

Another important concept to be addressed in generating and assessing new areas of activity is that of *opportunity cost*. All resources, including staff and facilities, can only be utilized for a limited time or with constraints. By developing a new area of activity, it may not be possible to do something else. In higher education, there are many such choices to be made. Academic staff must consider whether they spend more or less time in developing new teaching, in recruiting more students, in undertaking more research, or in working with industry or the community. By choosing to do more research, that member of staff might be less able to take on more students. Within the planning process, such decisions about the relative balance of activity and about the opportunity costs involved will be central to the evaluation of new ideas which emerge.

Commonly, the number of new ideas will far outweigh the resources likely to be available. In one sense this surplus is to be welcomed and indicates a healthy, vigourous institution. However, it can also cause difficulties. There is a danger of "wish-lists" with no realistic chance of success and of creating expectations which are then unfulfilled. Such disappointment can be corrosive of staff morale and participation. It is important, therefore, that the process of innovation and the generation of ideas be managed, working within a known framework and context. This is a difficult balance to strike. "Thinking the unthinkable" is often important in stimulating radical change and development; and imagination is a crucial characteristic of any planner. Yet some appreciation of the working environment is also essential.

Within the process of planning, it is important that new strategic developments be tested at different levels, and will form part of the debate between senior managers and heads of department. The decision-making mechanism which eventually will accept or reject ideas and which will prioritize new ideas must be open and clearly understood by all concerned in order to ensure broad consent and to minimize alienation from the planning process. It is also important that the consideration of new developments be undertaken alongside resource implications from an early stage. It is demoralizing for all concerned if excitement and anticipation are aroused without any realistic possibility of eventual achievement. A specific fund for strategic developments is an important part of this exercise, to assist with new activity. Some discretion for senior managers or for the main planning committee in the allocation of these funds, subject to necessary accountability, can also help in the promotion of new activity, offering scope for flexibility and rapid change.

Ideas and suggestions are also important in seeking ways to improve existing activities. Again, it is necessary to invite ideas from any level within the institution or from external parties. External comparison, possibly undertaken as part of a formal benchmarking exercise, is very helpful in identifying good practice. Learning from others, applying that knowledge, and seeking to improve on that knowledge is part of the planning process. There is no point in "reinventing the wheel". Such comparisons are especially important in looking at administrative processes and the assessment of costs.

The process of information accumulation and analysis is also likely to question certain existing activities. Ideas of this kind are less likely to emerge from staff within the institution, especially in a bottom-up approach. This reality is not surprising. On the one hand, staff will rarely volunteer their own activity to be withdrawn or reduced in size; on the other hand, staff collegiality means that few staff will "point the finger" at other activities. Moreover, when ideas do emerge in this way, they may reflect personal prejudice rather than considered judgement.

However, the ability to withdraw from activities with the minimum of disruption or hurt for staff or students is crucial to successful planning in higher education.

Where ideas for the termination or reduction of existing activities are under discussion, it is essential that clear criteria for assessment are set out from the start. Such criteria will almost certainly include factors such as cost and student demand, but may also include an assessment of individual performance in teaching and/or research. This approach will almost certainly lead to difficult decisions, possibly affecting the career position of members of staff. Clear criteria and transparency will help to make such decisions more acceptable, both internally and externally. Similarly, effective analysis of alternative courses of action is important. It is necessary as part of the planning process for senior managers to understand likely difficulties in advance and to have procedures in place to tackle issues which arise. *Ad hoc* responses to such problems are unlikely to be effective or acceptable to the institution as a whole and may undermine the credibility and outcome of the entire planning process.

The generation of ideas is a vital part of the planning process. It is an imaginative and creative process, informed by statistical indicators and formal measures of activity, but not slavishly driven by them. All good planning procedures should include provision for "brainstorming" in order to develop new ideas. Taking key staff away from the day-to-day working environment for short periods or retreats to work intensively on planning matters can also be helpful. Planning should be guided by modelling and analysis, but should also leave room for human judgment and intuition; the idea that a particular line of research will be important in the future or that a certain activity is on the verge of a breakthrough. This is the "feel and touch" approach to planning, based on deep knowledge and understanding both of the institution and of the wider higher education environment. Such judgements may not always work out well, a reality that must be acknowledged by all concerned, but with experienced planners it is likely that decisions will be successful more often than not. In the end, the assessment of ideas and eventual decision making must remain an exercise in judgment by the individuals concerned based on the best information available and their own knowledge and experience.

iv) Enabling. If planning is to be successful, it is necessary for certain conditions to exist:

Attitudes:	Positive attitudes to new ideas
	Incentives to encourage people to make contributions
	Willingness to change
	An acceptance of calculated risk and speculation
	Willingness to learn from mistakes
	Ambition to enhance contribution to higher education, both personal and institutional
	A competitive edge
Aptitudes:	Decisiveness
	Determination
	Understanding of the effect of change on individuals
	Vision
	Imagination
	Creativity
	Ability to enthuse and motivate others

Skills required for planning and implementing change:	Leadership
	Quantitative
	Presentation
	Management and financial accounting
	Understanding and development of information systems
	Marketing, whether provided internally or externally
	Flexible teaching and research personnel
	Planning and monitoring
	Counselling
Resources necessary to support change:	Incentives to cut costs and generate income
	Time to prepare and consult
	Financing to invest in change
	Information systems and technology
	Estate and other physical assets
	Commitment to retraining and staff development
Information for managers:	Data for analysis
	Project progress reports
	Monitoring reports on return plans
	Management accounts which identify the true cost of activities

In an ideal world, all of these conditions will be present. In practice, however, it is likely that some of these factors will be absent or will be present to varying degrees within the institution. Indeed, an effective planning process will blend together the different skills of individuals throughout a university. The key factor, therefore, is almost certainly leadership, especially the capacity to coordinate and inspire others towards a common end and the ability to take decisions both with and without consultation as appropriate, according to circumstances.

4.2. DOCUMENTATION AND DISSEMINATION

The planning process will generate a series of key documents:

- Mission Statement
- Strategic or Corporate Plan
- Operational or Integrated Plans

Within the process, much more documentation will be produced including background papers, statistics, analyses, and reports on particular issues, from *ad hoc* groups or other consultants. Such documentation needs to be logged and should be available for consultation.

Mission Statement

The Mission Statement is normally a brief statement of institutional mandates, sometimes accompanied by an affirmation of core values and institutional distinctiveness. Commonly, such statements are dismissed by staff working in higher education as bland and lacking in real input and as "stating the obvious". However, they do provide an overall framework within which the planning process will operate. The Mission Statement attempts to sum up the core philosophy and aspirations of each university and therefore sets the tone for the more detailed plans which follow. Some institutions include a further Statement of vision or of strategic aims and policies.

The Statement of Mission usually includes a commitment to quality and relevance and views these two concepts as mutually supportive. It may also include a commitment to high-level science development and application, as well as a commitment to address issues of equity, access, and representativeness in decision-making bodies.

The values underlying the mission are of the utmost importance. They should be made explicit in order to be known and shared by the majority of the members of the academic community. Here are some very significant examples:

- Excellence
- Academic freedom, freedom of speech, and the right to differ
- Tolerance for diversity, including national, cultural, and other differences
- Openness and transparency
- A culture of learning
- Respect for all forms of life and the environment
- Order and stability
- A client-, service-, and community-oriented approach
- Entrepreneurship
- Freedom of religion and respect for different life and world views

For many universities in Central, Eastern, and South East Europe, the very concept of a university mission was unknown during the communist period (Slavova, 2000), or it was defined, usually by the central party and state authorities, according to the then prevalent ideology. It is only in the post-communist and/or post-conflict period, that universities themselves, on the basis of academic autonomy, could first attempt to define their own missions. The activity took place in volatile social and political circumstances (see, for example, Marga, 2000):

- *Political:* the abolition of the old dictatorial structures and the transition to a society based on individual freedom, the rule of law, political pluralism, and a market economy.
- *Academic:* the elimination of the ideological constraints, the reinstatement of academic autonomy and freedoms; the diversification of the educational structures and curricula in the existing universities; the emergence of new universities, both public and private; the emergence of fee-paying education; a significant role for research.

- *Contextual:* the need to take into account the conflicting pressures by different stakeholders, including the academic establishment, the central authorities, students and potential students, the business community, local communities, and the international partners; the need to ensure the international relevance and competitiveness of the universities.

Strategic Plan

The Strategic Plan will normally include some or all of the following elements:

- An introduction to the organization which explains why the plan has been prepared at this particular time.
- A mission statement, either reproduced in full or in summary.
- A set of high-level strategic aims and aspirations. These may be grouped under broad headings including:
    - research
    - teaching and learning
    - staff
    - students
    - quality
    - increasing opportunity and participation
    - interaction with the community
    - internationalization
    - technology transfer and the exploitation of research
    - continuing professional development.
- Analysis of the present position facing the institution, with an overview of current activity, including student numbers, research income, financial position, and estate.
- Environmental analysis, including the political, economic, and social context.
- A statement of institutional organization, including any proposals for restructuring or revised operating

procedures (such as changes in resource allocation or quality assurance and assessment).

- A schedule of the main objectives over the duration of the plan, including an indication of where responsibility for implementation rests and the timescale for completion.
- A discussion and summary of operational strategies with specific targets and timescales, and an indication of resources available. These strategies will normally reflect the high level strategic aims. Essential operating strategies include:

  - research
  - teaching and learning
  - human resources
  - internationalization
  - estates
  - information and information systems

  In each case, the summary will highlight new developments or key strategic decisions. Sometimes, the Strategic Plan may refer to further operating plans or sub-plans for particular issues. Examples include:

  - student recruitment and profile of student numbers
  - marketing
  - knowledge transfer
  - procurement
  - support services
  - postgraduate study
  - part-time study
  - quality management
  - transport
  - widening participation
  - environment
  - finance

- Financial and other data to demonstrate the feasibility of the plans and to drive detailed resource allocation.

- Explanation of arrangements for implementation, monitoring, and review. Key issues include how academic quality will be maintained and improved, how learning resources will be developed, how the staffing plan will enable the recruitment and development of staff to meet operational needs, how capital developments will be financed, how information systems will be developed for academic and management purposes and how the institution aims to meet the needs of the economy and society within local, regional, national, and international contexts.

Operational Plans

In order to meet the objectives set out in the Strategic Plan, it is necessary for universities to develop a range of operating strategies. These will be more detailed, taking the institutional objectives and developing more specific plans with clear targets and time scales for individual organizational units.

Whilst the Strategic Plan lays down the direction of the institution across the broad span of activity, the Operational Plan sets out specific targets with which all staff and students will need to identify (*e.g.*, how many students on particular courses by a specified date or how many staff of different types in a department or Faculty).

Figure 8. The various forms taken by operational plans

Academic-based	Learning and teaching strategy	- Institution wide
	Research strategy	
	Widening participation strategy	
	Internationalization	
Resource-based	Finance strategy	- Institution wide
	Estates strategy	
	Information and information systems	
	Marketing	
	Human resources	
	Environment	
Activity-based	Faculty or department	- Organizational unit
	Support services	

The Operational Plan includes some key features:

- *Targets*: In order to focus attention it is important to set out targets for particular activities. Targets are most effective if they are SMART (*specific, measurable, achievable, relevant, and timely*). In order to facilitate effective monitoring, it is essential that targets be capable of measurement over time. It is also important to ensure that targets are negotiated and "owned" by those concerned. Targets set in a top-down fashion without consultation with staff actually responsible for delivery are unlikely to be accepted and achieved. As a general rule, the smaller the number of targets, the greater the prospect of successful achievement. Achievability is vital in order to maintain credibility and the desire to succeed. At the same time, however, targets should be stretchable. There is no point in "soft" targets. This balance is difficult to strike and depends upon negotiation and detailed knowledge on the part of senior managers of what is or is not realistic.
- *Milestones*: The concept of "milestones" can be helpful in identifying the steps necessary to achieve long-term objectives. Such identification involves the establishment of interim targets to be reached towards the ultimate goal.
- *Responsibility*: In order to ensure effective implementation, it is important to indicate who is responsible for the achievement of a particular target. This may be a committee or group, but is often more effective if responsibility is allocated to named individuals. In this way, corporate tasks can become personal objectives for the individuals concerned.
- *Integration*: The various Operational Plans must be integrated. They cannot be in conflict with one another, especially in terms of resource requirements. In practice, there will be overlap between different plans. New developments often span both teaching and research, and infrastructure investments may support a wide range of activities. Operational Plans are often prepared

as stand-alone documents, and effective integration is not always easy to achieve. However, if the Strategic Plan has set out clearly the overall framework and objectives and if similar procedures of consultation are followed, the risks of dislocation can be minimized. Operational Plans will normally be prepared by individuals or groups not involved in overall strategic planning. This preparation can be eased by effective line management. Thus, a Dean might be involved in institutional planning and be responsible for oversight of planning in his or her Faculty, or a senior officer might be responsible for particular activities such as research or teaching. Another possibility is to develop a process of interaction whereby operating strategies are considered in draft form by senior managers or the overall planning body before final approval and implementation.

Particular issues relate to the preparation of activity-based plans by individual Faculties, Schools, departments or other organizational units. These should represent a microcosm of the whole planning process, indicating how particular organizational units will meet the targets set out in the overall Strategic Plan and in the other operating plans. Thus, an academic department's Operating Plan will include teaching, research, human resources, finance, estates, and other elements of the overall university plan. A common problem at this level is the diversity of approaches and methods of presentation at departmental level. This problem can be reduced by the use of a standard planning format or series of templates which force all departments to consider the same issues and to respond in a consistent way. Again, a process of interaction with senior management or with the overall planning committee is helpful in ensuring that academic and service departments are planning in line with institutional objectives. Such dialogue is also useful in ensuring that resources are deployed at the point of delivery of teaching and research in line with the Strategic Plan.

Dissemination

Having completed preparation of the Strategic Plan and the various Operating Plans, it is essential that plans be fully disseminated amongst interested parties. A Strategic Plan is often a public document made available outside of the university, either in full or in an abridged form or both. Good visual presentation is therefore essential. Moreover, it should be written in a form that is readily understood by non-specialists in higher education. Briefings for the press or other stakeholder groups may also be appropriate. Internally, the full plan may be made available to all staff, either in hard copy or electronically.

By contrast, Operational Plans may have a more restricted circulation as appropriate for the subject matter. A key point is that those involved in the achievement of specific targets have full access to the Plan. However, plans may also contain information which is politically, personally, competitively or commercially sensitive. Circulation outside of the institution may therefore be controlled. Sometimes summary publications are helpful where further internal or external dissemination is appropriate.

4.3. IMPLEMENTATION

The whole planning process is worthless if the plans are not implemented. The plans must therefore lead to clear targets and actions with clearly assigned responsibilities. This process will permeate all levels within the organization. In the end, each individual member of staff should be aware of his or her responsibilities in delivering the overall institutional objectives and will be monitored accordingly.

In achieving the successful implementation of plans, there are a number of important issues to keep in mind:

- *Organizational structure*: The organizational structure of the university should be in line with the Strategic Plan. Thus, departments and services and arrangements for line management should reflect the targets set out in the

Plan. Issues to be addressed include the number and size of academic units, the realignment of cognate academic groups, the structure of academic and administrative support services, and the responsibilities of senior managers.

- *Resource allocation*: It is imperative that the institutional arrangements for resource allocation support the planning process and are not in conflict with it. There are dangers that a resource allocation model which is totally or mainly formulaic in approach may lead to funding allocations which run counter to planning objectives. Planning must drive resource allocation *not vice versa*. This process can be assisted in a number of ways:
    - involvement of the same people in both planning and resource allocation;
    - scheduling the various processes so that they follow a logical progression;
    - explicitly linking the preparation of the annual budget with the monitoring and updating of plans;
    - ensuring that the resource allocation and accounting procedures are conducted in a transparent way;
    - allocation of funds specifically to support new developments as part of the planning process;
    - signing off for all plans by the appropriate financial officers;
    - all plans should be prepared in recognition of resource requirements.
- *Change management*: Planning may lead to significant, radical change within an organization. Effective change management requires a shared vision, a clear strategy, supportive resource allocation, and effective monitoring. In particular, it requires strong management of human resources including communication, consultation, counselling, training and retraining, staff development, recruitment, and rewarding. On occasions, it may be

helpful to use external advisers or consultants, to offer a fresh approach to difficult issues or to assist in developing new in-house skills.

- *Project management*: Where planning results in major new projects, such as new buildings or the merger of existing organizational units, it may be necessary to use more formal methods of project management. *Ad hoc* project groups may be established to take forward particular tasks, and specialist project managers might be used. Software packages are now available to support this process.
- *Communication*: Staff morale is a vital factor in achieving successful implementation. This can be helped by effective communication of progress across the institution as a whole.

Overall, implementation is dependent upon the capability and delivery of individual members of staff. They must be equipped, through appropriate resourcing and training, and motivated, through effective leadership, incentives, and rewards.

Implementing strategic planning and management in universities in the new states, entities, and communities of South East Europe needs to take into account the social and cultural context. Firstly, a *cultural routine* in the region is the dominance of oral forms of agreements, rules, and standards instead of written ones (the reaction against the written ones is apparently the by-product of the distrust of official regulations, commonly perceived as alienating, imposed by the state against the individual will). There is a large propensity to improvise as a form of freedom instead of a planned activity that is still perceived as a form of constraint. Throughout the region, spontaneity, instead of planning and monitoring, has an important place.

Secondly, *the balance between amateurism and professionalism is still in the favour of the former.* The "all in one" syndrome is widespread. There are very few individuals who have the capabilities, determination, influence, and power to produce the deep changes necessary in such societies, especially in terms of building a local civil society and proper standards of education. These few people are forced to play many social roles: professors and university managers, politicians, active members in the NGOs, columnists, etc. The effect can be a lack of possibility to improve professional skills in one precise direction. The syndrome is spread especially at the level of the representatives of the mature generation who consider themselves responsible for the democratic future of their society. The professionalism is imported or exported. Young people who specialize themselves abroad become a sort of "export merchandise" for external institutions or are used as main local resources for the international organizations in the region.

4.4. MONITORING

The final stage in the planning process is monitoring. The aim is to assess progress made towards achievement of the targets put forward and thereby to inform the updating and revision of plans, including the introduction of new or amended targets. Monitoring will also take into account changing circumstances and environment.

Both the overall Strategic Plan and the various operating strategies need to be monitored. Particular attention needs to be paid to areas of risk or to major new developments, including capital projects.

Arrangements for monitoring need to be agreed upon and disseminated from the outset. *Ad hoc* systems devised and put in place very late in the process are unlikely to command respect and acceptance. Issues to be considered include:

- the format of reporting. It should be consistent among organizational units and over time to ensure easy comparability;
- the frequency and regularity of information required;
- who provides the necessary data or narrative, who interprets it, and who scrutinizes it;
- the reliability of the information collected.

Figure 9. Proposed institutional structure

Level of Monitoring	Nature of monitoring	Person or group	Timing
Strategic Plan	To maintain an ongoing awareness of progress on issues of timing, general significance or financial impact.	Governing body, possibly through a Planning and Resources Committee	*Annual*
	To receive assurance that objectives and tasks are being implemented.	Vice-Chancellor/Principal/Rector Senior managers Head of Planning	
Operating plans	To ensure that tasks are being implemented in accordance with the plans.	Vice-Chancellor/Principal/Rector Senior managers	*Half yearly*
	To make adjustments to targets in order to ensure that overall objectives are met as closely as possible.	Head of Planning Heads of organizational units and services Line managers Responsible individuals Project leaders	
Financial plans	To review overall institutional finances in line with Strategic Plan	Finance Department Vice-Chancellor Senior officers	*Monthly*
Budget holders	To ensure that projected expenditure is in line with resources available	Budget holder Project leader Line managers	*Monthly*

As with the whole planning process, the arrangements for monitoring must in themselves be cost-effective. Thus, external audit, whilst useful in particular cases, might be both expensive and time-consuming in practice. It is also important to ensure that the monitoring is rigorous, but not threatening. It should be a helpful, creative process used constructively to develop new plans or to respond to changing conditions.

Overall responsibility for monitoring must rest with the governing body. However, in practice, it is necessary to develop a structure for monitoring at all levels within the institution. Again, a key role will be exercised by the main planning and resources committee and by senior managers; at lower levels, monitoring will be undertaken by responsible individuals or line managers.

There may be some overlap between different levels. For example, the Head of Planning needs to have oversight of the whole structure, and the central Finance Department needs oversight of all financial affairs.

Monitoring can become a very detailed process. Whilst such detail may be necessary and helpful for managers, it is also important to retain a strategic overview based on summary information. It is also important not to over-react to different levels of performance. As with other parts of the planning process, analysis of trends over a number of years may be more significant than a single set of data.

Information can be obtained in many different ways:

- written reports or operating statements from the people responsible for implementing a task;
- verbal or written reports from the senior manager responsible for a particular task or area of activity;
- verbal or written reports from the Head of Planning;
- a cycle of meetings with those responsible for particular plans (*e.g.*, Deans or Heads of Departments).

In order to assist with monitoring, it is often helpful to develop a series of key performance indicators, normally including student data, measures of research activity and financial information, which are readily updated and give an immediate impression of progress in implementing the Strategic Plan. Wherever possible, the use of common proformas or templates should be encouraged.

In some cases, it may be necessary to undertake detailed reviews of particular areas of activity, including the assessment of major projects. A good discipline to be developed involves formal evaluations or post-implementation reviews of major projects to highlight lessons learned and to bring forward new ideas.

Again, it is important that the monitoring process is not excessively finance driven. Financial monitoring is an essential function, but the aim of monitoring is to ensure that agreed targets and actions have been achieved. A balanced budget, both at institutional level or at the level of an organizational unit, is not an effective end in itself if targets have not been achieved. Failure to achieve targets whilst achieving financial balance requires further consideration just as much as an activity which is not meeting financial targets.

The monitoring of one activity is intended to highlight progress or the lack of it towards the achievement of targets. In itself, however, this action is not sufficient. An effective monitoring report will propose corrective action or will feed into a future planning exercise.

Chapter 5

Operational Strategies

To underpin the Strategic or Corporate Plan of a University, it is necessary to develop a range of operational strategies. These may be institution-wide based on particular themes or may be based on individual organizational units. Sometimes, a further strategy will be needed to address a specific issue of concern to the institution. Key operational strategies are likely to include:

- teaching and learning
- research
- human resources
- estates
- internationalization
- information and information systems

5.1. TEACHING AND LEARNING STRATEGY

This document is a crucial one that will impact on activity throughout the institution. It will set out both targets and working procedures which underpin core activities within the university. In some cases, the Strategy will bring together a series of sub-plans in areas such as student numbers, new courses, quality assurance, and the widening of participation. However, these are interacting activities, and the Teaching and Learning Strategy must provide overall integration. Preparation of the Teaching and Learning Strategy will normally be the responsibility of a central Teaching Committee working closely with senior academic and administrative officers. It is important that the work of this Committee be informed by detailed student related data including the number and quality of applicants, student admissions profiles (including gender, age, socio-economic backgrounds, ethnicity, and disability), student progression, completion rates, and employment statistics. Such information must be presented in an easily assimilated way, that points out key trends and areas of concern.

The Strategy will normally cover the following:

- *Student Numbers*: The Strategy should lay down clear targets for admission to particular subjects or groups of courses. This should reflect demand but may also reflect the policies applied by Government or funding bodies. The targets may include sub-degree, undergraduate, and taught postgraduate courses and will be divided between full-time and part-time and between home and international. Planning may be at the level of specific courses. In practice, however, scope for funding transfers between courses is a helpful operational tool.
- *Marketing and Recruitment*: The Strategy needs to set out procedures for student recruitment, including admissions requirements, with targets for entrance qualifications. The Strategy should also provide the framework for external marketing.
- *New Developments*: The Strategy will set out new course developments. This will be based on detailed market research and financial projections of both income and expenditure. An assessment of infrastructure requirements, including the impact on libraries and computing services, must also be undertaken.
- *Withdrawal of Activities*: It is equally important for the Strategy to address the withdrawal of courses that are no longer viable in financial or academic terms.
- *Widening Participation*: The Teaching and Learning Strategy will normally embrace the strategy of the institution towards increasing opportunities to study in higher education. This may include relationships with other higher education providers, development of alternative routes for entry, "taster" courses and events for target student groups, links with schools and colleges, and the introduction of new teaching and assessment procedures.

- *Progression*: The Strategy should establish targets for successful completion of teaching programmes. This requires the regular scrutiny of dropout rates and of the reasons for non-completion.
- *Assessment*: The Strategy will provide a framework for assessment procedures within the institution, including examination arrangements, development of new methods of assessment, and the establishment of assessment conventions.
- *Quality Assurance*: Overarching these activities, it is important that the Teaching and Learning Strategy set out the arrangements for quality assurance across the institution. This will cover the scrutiny of new course proposals and the assessment of existing provision on a regular basis, including a detailed audit of procedures at both departmental and institutional levels.

5.2. RESEARCH STRATEGY

As with other plans, the Research Strategy will begin with a restatement of the institutional mission and key aims as they relate to research activity and with an analysis of the environment. The restatement may include an assessment of the standing of the institution in particular areas of research activity, using both internal and external comparisons. Some analysis of important developments in national research policies (*e.g.*, Government priorities) is also important. Responsibility for the preparation and implementation of the Plan will normally rest with a Research Committee. Other issues to be covered may include:

- *Management of Research*: Success in research depends upon the insight, innovation, and intellectual strengths of individual researchers and of the teams that they form. The position of individual members of staff and appointing procedures may be set out. Broad expectations may be stated, most notably that all staff are expected to manage their time and other resources in line with the objectives of the university. Managerial arrangements in departments may include the establishment of internal research committees for the encouragement and co-ordination of research activities, including the dissemination of good practice. Arrangements for the monitoring of research and the development of personal research strategies might also be discussed. Other issues to be addressed include:

- arrangements for the allocation of workloads, possibly including the use of fee schedule, to ensure that time is available for research and to allow for periods of relative emphasis on teaching or research;
- arrangements for study leave;
- attendance at meetings and conferences, including international travel;
- arrangements for research seminar programmes;
- attracting research visitors;
- arrangements for fostering inter-disciplinary research.

At institutional level, a Research Committee may have overall responsibility for the implementation and monitoring of the Research Strategy, including the achievement of key objectives and targets. The Committee may have a role in the selective allocation of resources to support research. It is important that internal arrangements for resource allocation reflect excellence in research and provide incentives for new research activity. The Research Committee will also have oversight of the infrastructure for research, including information systems and library facilities.

- *External Research Income*: The Research Strategy should set out targets by source of income and by organizational unit. Such targets should be agreed upon within the institution and should be achievable over time. As with all targets, they must be challenging but realistic. They must be “owned” by individual departments or staff. The

Strategy may also discuss institutional arrangements for the preparation of grant and contract applications, including the scrutiny of new proposals before submission to external funding bodies. A crucial issue is the establishment of institutional policy on the costing of research proposals and the allocation of income, including the recovery of indirect costs.

- *Postgraduate Students*: The Research Strategy will set out targets by taught courses and research and by mode of study (full-time or part-time). This strategy may include the development of new postgraduate programmes, as well as, marketing and recruitment activities. Reference may be made to facilities for postgraduate students, including workrooms and access to library and computing facilities; in some cases, the establishment of minimum levels of expectation may be appropriate. The Strategy may also consider the availability of residential and social facilities and support services for postgraduates. An important area will be the development of quality assurance procedures relative to postgraduate students, including research training, progression, and assessment.
- *Staffing Matters*: The Research Strategy will set out ways in which newly appointed academic staff can be supported in the central development of their research activities. Particular incentives might include reduced teaching loads, guidance on publications and funding, training programmes, monitoring and appraisal schemes, and direct financial assistance. Subsequent career development will also be considered, including promotion procedures. It will be important to set out arrangements for research staff employed on short-term contracts in order to ensure career development and progression.
- *Support Services*: It is important to recognize the role played by academic and administrative services in underpinning the Research Strategy. New developments,

such as enhanced information services or library facilities, will be considered.

- *Innovation and Intellectual Property*: Increasingly, institutions are seeking to encourage the commercialization of products, processes, and services arising, directly or indirectly, from research and development. This effort involves the successful exploitation of intellectual property. The Research Strategy needs to consider targets for income generation and to set out guidelines, including financial incentives, for those involved in the generation of intellectual property.

5.3. HUMAN RESOURCES STRATEGY

The Human Resources Strategy underpins both the overall Strategic Plan and all the individual operating plans. Without the effective management of human resources, it is impossible for any higher education institution to succeed. Management needs to reflect the nature of higher education which still depends crucially on the ideas and initiatives of individual members of staff. The Strategy needs to be sensitive to the widely varying needs of individuals. A Human Resources Strategy must seek to develop and channel the input of many individuals in order to meet overall institutional objectives. Responsibility for the development and implementation of the Human Resources Strategy will rest with a Human Resources or Personnel Committee.

Central to the Human Resources Strategy will be information showing:

- number of staff, by staff category (*e.g.*, academic, technical, ancillary) in each organizational unit;
- information on staff turnover and recruitment;
- information on age profiles of staff;
- information on salary and other reward schemes.

The Human Resources Strategy will normally include:

- *Employee Development*: Proposals might cover staff probation, appraisal and training programmes. It is important that such programmes reflect the needs of staff at all levels in the organization. It is also necessary to set out clear procedures and guidelines for managing poor performance and for dealing with disciplinary matters.
- *Health, Safety, and Welfare*: There are important benefits to the institution from minimizing absenteeism and other costs which may arise from inadequate workplace safety. The Human Resources Strategy may set out targets for safety, including reduced numbers of accidents of different kinds, and should establish clear monitoring procedures. Occupational health is similarly important, and the Plan should set out ways in which the institution will meet its responsibilities to staff. Targets for absence owing to ill-health may be established. Welfare of staff may also be fostered through the development of staff clubs and societies and sports facilities.
- *Employee Relations*: It is essential that the university interact effectively with its staff. The Human Resources Strategy may set out the roles and responsibilities of line managers and also arrangements for formal links with staff associations or trades unions. In preparing a Human Resources Strategy, it may be helpful to consider the terms and conditions of staff, including hours of work, holiday entitlements and pensions, as well as reward mechanisms. Increasingly, higher education institutions are developing clear procedures for job evaluation in order to guide grading and staff promotions.
- *Employee Resourcing*: Recruitment and retention of the best available staff is vital if the institution is to achieve its overall goals. The Human Resources Strategy will therefore set out targets and procedures for staff recruitment.

- *Employee Diversity and Opportunity*: The Human Resources Strategy will set out overall policy and targets concerning equal opportunities and representation, including gender issues, disability, and racism.

5.4. ESTATES

An Estates Strategy is a crucial part of the overall planning process. Often, it is an area in which it is difficult to achieve effective integration with other plans mainly because of the need to involve professional staff who may have little involvement in other planning activities. However, the availability of suitable buildings, teaching facilities, and laboratories poses a major constraint on the development of new teaching and research. Buildings also represent a substantial financial investment which must be planned carefully alongside other demands on university resources. It is important that the development of an Estates Strategy be informed by a detailed database of current assets, including the nature of rooms and other spaces, their condition and, if possible, the present level of utilization (hours of the day and days in the year). This information may also be helpful if the institution decides to follow a routine of devolved space charging. Institutions should also be aware of the costs of their space including the costs of lighting, heating, power, and other services such as water and gas. Against this background, it is possible to assess whether new academic developments can be accommodated within existing space, whether space might be better utilized by internal re-organization and whether new buildings are needed. The Estates Strategy will normally be developed and implemented by an Estates Committee. Commonly, however, much responsibility is delegated to professional building officers. This is inevitable, given the nature of the specialized expertise involved, but it is as important that such staffs be fully aware of the broad planning context and any financial constraints in place. The Estates Strategy will normally include:

- *Self-Assessment*: The Strategy must begin with a detailed assessment of the present stock of buildings and land holdings. As part of this process, institutions will commonly use a set of norms in order to facilitate effective comparisons. Norms might set out a minimum entitlement per student or per member of staff and should distinguish between different types of space (heavily serviced, laboratories, libraries, etc.). Such an ordering will help to indicate those departments or activities that are relatively over or under supported.
- *Maintenance*: The Strategy should set out a clear programme for building maintenance, including long-term projects and majors refurbishment. Sometimes, external consultants may be used in developing this programme of work. Preferably, a rolling ten-year programme should be established, with clear interim targets.
- *Re-organization*: The overall Strategic Plan of the university and other operating plans may require the movement of departments or groups of staff in order to develop better academic or operational synergies or to achieve enhanced operational efficiency. Such movements require a very careful planning input and often benefit from specialized project management. Clear targets and timescales, including the possible need for decanting space or temporary accommodation, are essential.
- *New Buildings:* The Strategy may identify the need for new buildings in order to meet academic objectives. Given the scale of investment required, it is important that institutions undertake a formal cost – benefit analysis. Detailed planning will need to take account of both present and future demands, costs, and methods of funding.
- *Long-term Vision*: It is important that institutions develop a long-term vision for their estates, including potential areas for development, if and when the opportunity

arises. This vision might include possible land or building acquisitions. Such plans need to be discussed with other parties, including neighbours and local authorities.

- *Environment*: An Estates Strategy will also need to address environmental issues. These include the development of buildings and landscape which are attractive to staff and students, targets for energy conservation, and arrangements for transport (car parking, cycle ways, buses etc).

5.5. INTERNATIONALIZATION

The development of a Strategy for Internationalization may not be seen as an essential action for all institutions of higher education. However, for any institution that aspires to international status, a clear strategy is needed. As with other plans, a careful self-assessment is needed which might include numbers of international students by subject and department, international staff and visitors, exchange schemes, and levels of international funding. A more detailed approach might also include an audit of course content to show the extent of internationally orientated teaching. Usually, internationalization will be the responsibility of a nominated senior officer, but may also be the responsibility of a strategy committee.

A Strategy for Internationalization is likely to set out incentives and targets for:

- recruitment of international students;
- numbers of students participating in exchange arrangements, both inward and outward;
- development of international collaborative activities, including joint teaching and research;
- language teaching and other cultural studies;
- recognition of international awards and qualifications;
- attracting international visitors.

For many of the universities of South East Europe, internationalization was not a priority during the period of communist government. The lack of autonomy and the administrative constraints imposed by the Party and the State, together with a drastic lack of funds, prevented them from developing international co-operation. However, in the present context, it is of great importance for universities to focus on and to enhance their involvement in international education and research. Their main efforts to be focused on are:

- Planning and institutional changes: the elaboration of a strategy for international co-operation; the establishment of internal institutional mechanisms (*e.g.*, of modern Offices for International Relations, working groups at departmental level, etc).
- Establishment of main priorities. These include:
    - promotion of the active participation in international programmes, *e.g.*, TEMPUS, SOCRATES/ERASMUS, COPERNICUS, CEEPUS, etc., and the 5th and 6th FRAMEWORK EU Programmes (research);
    - the development of the European dimension of higher education and the academic recognition of the diplomas European universities issue;
    - the promotion of international mobility and academic exchanges;
    - participation in international programmes, including co-operation with foreign scientific organizations;
    - development of programmes in other languages (especially English, French, and German);
    - the gaining of increased international credit.

5.6. INFORMATION STRATEGY

It is now commonplace for universities to develop formal information strategies. In some cases, such strategies reflect legal requirements covering the freedom of information and the entitlements of staff and students. However, it also reflects the importance of information infrastructure and management within higher education and the growing levels of expenditure required. Many institutions now have Information Committees responsible for strategy in this area, normally working closely with professional staff. The Strategy may cover both Information in itself and Information Systems and is likely to bring together services offered by both libraries and computing services within an integrated strategy. An Information Strategy might include the following:

- *Information Targets and Guidelines*: The Strategy will set out in formal terms the entitlement of staff and students to information. It will also include targets for enhancing the internal communication of information, including committee minutes and papers as well as other operating information. Guidelines may also be set down regarding personal information.
- *Teaching-related Services*: The Strategy will include targets for hardware, including the development of computing facilities for student use and the application of software packages. However, it is important that the Strategy go further in encouraging the development of computer-based learning, including faculties, new teaching packages, staff training, and quality assurance.
- *Research-related services*: Information systems are now fundamental for research activity in all subject areas. The Information Strategy will need to establish policy and targets regarding hardware provision (especially high performance computing), networking, and specialist software requirements. Computing power is now a major factor determining levels of research activity. Similarly, it is essential to establish fast links with other researchers both within the institution and in other institutions across the world.
- *Management Information*: All universities now depend on the provision of detailed, accurate management information commonly delivered in electronic format for use by all staff, both academic and administrative. The Information Strategy will set out key targets for the delivery of such information.

Central to the whole Information Strategy will be the development of a replacement strategy, given the pace of change and the costs involved in the updating of information systems.

Chapter 6

Appendices

The following examples of current practice are included to demonstrate aspects of strategic planning and management in higher education. They are drawn from a variety of institutions, both in Europe and the rest of the world. They are not intended to provide models that can be adopted in their entirety; rather, they should be viewed as illustrations of the approach applied by these institutions and reflecting their own particular circumstances.

MISSION STATEMENTS

- Sarah Lawrence College, USA
- University of Leicester, U.K.
- University "Politehnica" of Bucharest, Romania
- Université Pierre et Marie Curie, France
- The Karol Adamiecki University of Economics in Katowice
- St. Stephen University, Gödöllő, Hungary
- University of Ghent, Belgium
- University of Groningen, Netherlands
- University of Vienna, Austria

Sarah Lawrence College

SARAH LAWRENCE COLLEGE has something to offer few other colleges do: a dogged belief in the power of the liberal arts to free us; a passionate commitment to a pedagogy focused on serious one-on-one intellectual encounters between faculty and students; a curriculum built on connections among disciplines and on the interdisciplinary nature of problem-solving and creativity; a lean administrative structure, without traditional departments, to enhance communication across intellectual boundaries; a vision of the arts as integrated to one another and deeply grounded in the larger liberal arts context.

(*cf.* D. Watson, 2000, p. 39).

University of Leicester, United Kingdom

The UNIVERSITY OF LEICESTER reaffirms the commitment in its Charter to the advancement of knowledge, the diffusion and extension of arts, sciences, and learning, and the provision of liberal, professional, and technological education, and will strive to enhance its position as a leading research and teaching institution, cultivating the synergy between research and teaching.

University "Politehnica" of Bucharest, Romania

Our "POLITEHNICA", in short UPB (University POLITEHNICA Bucharest) is not only the oldest technical university, but also the largest one in Romania. Its foremost mission is engineering training at all levels (BSc, MSc, PhD) by imparting knowledge and practical skills at the same time with encouraging creative thinking, the engineer's magic wand that allows him/her to answer the demands of market economy and the challenge of breakthrough technology. At the same time, like any other great university, POLY is not only a transmitter but also a creator of science and technology.

On the other hand, the university has to be sensitive to the needs of the community and to the changes sweeping through contemporary society; in this respect, the university cannot ignore social and economic reality, which means it is bound to train the future generations against the social background of their time. Perhaps one might sum up all these attempts in one word: truth, the search for it and its dissemination. UPB has taken this task as its mission of honour likely to allow it to have a say in shaping society onto the path of progress, excellence, and strength.

There is no doubt about the fact that, in implementing the above goals, our university is led by the clear objectives deriving from a coherent strategy. The development of actual academic autonomy makes room for responsible decision-making.

Thus, our first priority among these objectives is up-dating, modernizing the educational process so as to provide structure and make it open, flexible, and highly comprehensive; this is how we deem it possible for the UPB to preserve its top position among the technical universities of the world, as well as its integration into the European academia. Our University keeps constant contact with the great engineering universities of Europe and participates in the educational and research programmes of the European Community as well as in the life of international academia, as a member of the most prestigious professional organizations.

Another important target is to increase our University's contribution to Romania's technological and industrial progress by developing scientific research and setting up the structures underpinning a modern, research-based educational system. It goes without saying that the implementation of the above goals is dependent upon the development of our University's information and communication network as well as on the implementation of modern academic management in tune with the new, credit based, globally funded operation of the educational process.

Last, but not least, among our priorities is up-dating both the services provided to students during their training and our own University Campus facilities as well.

On the threshold of the new century and millennium, the POLITEHNICA University of Bucharest is widely opening its gates to all the youngsters eager for knowledge, for personal and professional development with the confidence of a warranted genuine school.

Université Pierre et Marie Curie, France

Cette proposition de contrat 1997-2000 marque résolument la volonté de l'Université Pierre et Marie Curie d'assurer les missions de service public qui lui sont confiées: formation, recherche, valorisation des résultats, diffusion de la culture. Elle met en œuvre des pratiques de formation innovantes favorisant l'insertion professionnelle des étudiants, des actions de formation permanente permettant par la validation des acquis professionnels la reprise d'études pour les adultes. L'Université souhaite s'impliquer dans un dispositif qui intègre les aspects académiques, professionnels et culturels indispensables à la formation de chaque personne, en développant un véritable esprit d'Université.

L'Université a une activité de recherche soutenue dans les domaines fondamentaux ou appliqués qui participe à son renom international. Elle développe la valorisation des résultats de la recherche créant ainsi des liens forts avec le secteur économique national ou international.

Le contribuable a généralement une vision de l'Université réduite à ses activités d'enseignement, vision nettement renforcée par tous les mouvements de protestation portant essentiellement sur les conditions d'encadrement des étudiants.

Le jugement interne des activités de l'Université, le recrutement des enseignants, l'appréciation qu'en portent les autorités ministérielles, voire le rayonnement international d'un établissement sont principalement fondés sur l'activité de recherche.

Cette dichotomie basée sur les fondements même de l'existence de l'Université, lieu de création et de diffusion du savoir, traduite dans les faites dans le statut des enseignants chercheurs, conduit à ce que l'Université Pierre et Marie Curie ait une politique visant à établir et maintenir un équilibre entre ses deux missions principales d'enseignement et de recherche. Ceci nécessite obligatoirement que cet équilibre se construise sur une base assurant un haut niveau de qualité dans ces deux fonctions et non sur un nivellement par le bas.

L'Université se doit de jouer un rôle important de conservatoire du patrimoine culturel du pays. En effet, les dévelopements modernes fortement médiatisés dans certaines disciplines tendent à occulter aux yeux du public l'importance d'un savoir plus traditionnel: c'est ainsi que les progrès de la biologie moléculaire rejettent dans l'ombre les disciplines d'observation des sciences naturelles, entraînant à terme, si aucune action n'est entreprise, la disparition des compétences dans ces domaines et l'impossibilité de les enseigner. A ce titre, l'Université favorise les actions de recherche dans les domaines qui sous-tendent l'enseignement et elle participe à la diffusion de la culture scientifique.

Forte de ses implantations en région, héritées de la Faculté des Sciences de Paris, nécessaires à ses activités de recherche et de coopération avec les autres universités nationales ou étrangères, elle joue un rôle national dans l'aménagement du territoire et participe au rayonnement international de la culture française.

The Karol Adamięćki University of Economics in Katowice

Our wish is to be perceived as a distinguished research and education centre with a valuable input to the economic life of the region as well as an important partner in the international arena. However, our greatest ambition is undoubtedly adding a new truly European dimension to our programmes of studies.

St. Stephen University, Gödöllö, Hungary

The University, as an autonomous institution of higher education, is qualified to execute the following general goals and tasks as parts of its mission:

The scientifically well-trained educators and researchers of the faculties and institutes of the University should offer, by the utilization of an up-to-date training system, fields, directions of study and training programmes, such that university students acquire knowledge suitable to their personal level of education, talent, and area of interest at a high level.

Through its scientific and professional background, the University should enable students to obtain basic information on scientific developments and practice in their chosen fields of study and, after graduation, to become creative members of society and of the economy.

Through the integrated realization of the basic interests of the University, it should at all times satisfy the general needs of society and, within this framework, the general needs of agriculture and Hungarian rural areas, along with the concrete economic and social needs of regions surrounding the University and its institutions.

The University wishes to play a decisive role in the fields of professional supplementary training, professional courses, and post-graduate training.

The aim of the University is to become the research center for the fields of science in which it is engaged.

The University, based on the former interests of member institutions, considers the provision of high quality human resources for rural areas, to raise their cultural level, and the promotion of civilization in these areas, to be special tasks.

The University will perform its tasks in the fields of the natural and environmental sciences, the basic and the applied agricultural and technical sciences, the veterinary sciences and in food studies, the applied economic sciences, in pedagogy, and in the arts and in arts studies.

In order to satisfy the demands of the human resources market and to increase the supply of higher education, all faculties and institutions of the University wish to expand fields and directions of education, increase the flexibility of their training system, develop opportunities for seamless transition among different departments and faculties, and increase the number of faculties for supplementary training.

The University will expand the utilization of credit-based standards that promote the unrestricted choice of subjects and directions of study to all of its institutions, and following legal regulation of the matter, will make it exclusive in all university units.

Faculties and institutions of the University have initiated a number of high-level training programmes; they play a leading role in pre-university and zero-year training and wish to expand the fields of training programmes that do not lead to the award of a diploma.

The University wishes to achieve a full-scale application of the most important aspects of research and higher education, such as: sciences, technology, management, communications, informatics, information systems, environmental protection, and sustainable development.

University of Ghent, Belgium

The University of Ghent (RUG) occupies a specific position among the Flemish universities. This position is defined in the RUG Mission Statement, which serves as the basis for the process of change and strategic policy planning at all levels. It is also the touchstone for the day-to-day management of the university.

i) distinguishes itself as a socially committed and pluralistic university that is open to all students, regardless of their ideological, political, cultural, or social background;

ii) defines itself in a broad international perspective, all the while accentuating its individuality in terms of language and culture;

iii) aims to encourage its students to adopt a critical approach within a creative, development-oriented, educational, and research environment;

iv) offers a broad spectrum of high-quality research-based educational programmes that are constantly being adapted to the most recent scholarly and scientific developments;

v) aims to develop in a selective manner the advanced degree programmes, as well as postgraduate and permanent education;

vi) aims to situate its educational and research activities within the broader social context and to remain in continual dialogue with all parties concerned;

vii) aims to promote and further develop fundamental independent research in all faculties and to be a world player in the selected fields of endeavour;

viii) aims to be an enterprising university with a focus on the social and economic applications of its research findings;

ix) attaches particular importance to the social facilities made available for students;

x) creates a stimulating environment for its staff and provides them with the fullest scope of opportunities for developing their potential;

xi) attaches particular importance to the participation of students, staff and social representatives in the formulation of policy;

xii) desires strong interaction with its alumni;

xiii) opts for a decentralised, dynamic organization model.

University of Groningen, The Netherlands

The University of Groningen is a long-established, traditional university located in a vibrant student city. It facilitates a wide range of high-quality teaching and research. Researchers, teachers, and students work at the cutting-edge of scholarship.

The University is committed to the close interweaving of teaching and research; the foundation of knowledge is to discover and to stimulate discovery. The University's programmes of study reflect society in all its variety and complexity, from theology to technology.

The University is committed to active teaching methods in its degree programmes, allowing scope for individual choice and personal development. Students are encouraged to learn in an atmosphere of openness, constructive discussion, and mutual support. The education offered by the university furthers general intellectual skills, thereby preparing its graduates for responsible positions in society and creates a climate for lifelong learning.

The University is committed to both theoretical and practical research, with particular emphasis upon interdisciplinary learning; it is at the borders of existing disciplines that genuine advances are made. Knowledge thrives only in a context of academic freedom and world-wide exchange of ideas. The University therefore maintains close connections with equivalent institutions abroad and encourages international exchanges of staff and students.

The University is committed to co-operation with public bodies, businesses and organizations in a united Europe. In addition, being the only university in the north of the Netherlands, it has special responsibility for cultural, social, and economic progress in its own region.

Teaching and research have a social and human responsibility. The University appoints its staff on the basis of their commitment to research and the education of students, and it offers an environment conducive to excellence. Staff and students play a significant role in all its decision-making processes. Respect for the views of others guarantees good relations within the institution. Good relations are essential to a lively and flourishing university.

University of Vienna, Austria

HISTORY AND LOCATION

The University of Vienna was established by its founder, Duke Rudolf IV, on 12th March 1365, on the model of the

Universities of Bologna and Paris in order that "the common good, just laws, human reason and prudence might develop and grow and ... so that every wise person might become more reasonable and every person lacking in wisdom might, through godly teaching, be brought to human reason in true knowledge and educated therein." It is the oldest university in the present-day German linguistic and cultural territory.

The history of the University of Vienna is marked by great achievements in scholarship, research, and teaching but also by crises and errors, such as the involvement of the university and its members in the crimes of National Socialism.

The University of Vienna sees its position at the geographical heart of Europe as both an opportunity and a challenge, and pledges itself to consider the relationship between politics, power and scholarship both critically and self-critically, to represent the principles of democracy both internally and externally, to continue to develop human and civil rights and to strive for their realization, to promote the understanding of cultures, nations and religions.

ETHICAL PRINCIPLES

The University of Vienna is expressly committed to the constitutional principle of freedom of research and teaching. The University regards central funding as the best means of realizing this constitutional principle. The University therefore sees itself as justified in seeking from the state the guarantee of adequate resources.

The University pledges itself to develop its students as responsible, critically aware, and ethically conscious human beings, to acknowledge and promote the independent achievements of researchers and students, to respect different opinions and positions, to serve the development of knowledge and to behave responsibly with new ideas and models, to initiate and support international and national efforts to fulfil social and humanitarian goals, to treat equally people of different sexual identity, religious, social and ethnic background, and to integrate those with handicaps, to promote ecological awareness, and to guarantee diversity of disciplines and subjects.

PRINCIPLES, GOALS, AND STRATEGIES

The task and the goal of the University of Vienna are research and teaching of the very highest quality. Research and teaching are understood as an indivisible unity. Research-driven teaching will promote the scholarly interest of students, will encourage participation in research activity, prevent the mere reproduction of an apparently fixed body of knowledge, and stimulate the pedagogical achievement of the teaching community.

The quality of the University's achievements is dependent on the optimum involvement of all its members. This quality is constantly being assessed and improved through international competition (comparison of achievement) and through evaluation of the results of teaching and research.

In order to achieve and retain a high level of quality in research and teaching, it is essential to promote and support academic mobility in all possible ways. Worldwide scholarly co-operation and the innovative stimuli that result from this are, for the University of Vienna, indispensable.

The University of Vienna undertakes the following types of research:

- basic research,
- applied research,
- subject-specific research,
- transdisciplinary research,

in all of which different questions and disciplinary interests are closely interrelated. This is particularly true of the relationship between subject-specific and transdisciplinary research. The individual profile of the different disciplines is revealed in subject-specific research. For this to be incorporated into a transdisciplinary context, it must consider its own specific premises and methods both critically and self-critically. It is, moreover, the responsibility of the university to create cross-disciplinary institutions and to promote the establishment of new areas of scholarly study.

Teaching at the University of Vienna is subject to the following maxims:

- The right to education and training is independent of the students' social background (equality of opportunity).
- Teaching is directed at the education and professional preparation of students and at the training of the next generation of scholars.
- Students will be advised and supported by their teachers and will be motivated for the academic career.
- The didactic competence and critical self-awareness of teachers will be further developed.
- Within the framework of its prescribed curricula the University seeks to create the greatest possible flexibility in the choice of study. Transdisciplinary networking of curricula is actively sought.
- Students should be fully informed of occupational and professional opportunities.
- Graduates should be enabled to participate in new scholarly developments through further and supplementary education and to obtain multiple qualifications.

THE ORGANIZATION OF THE UNIVERSITY OF VIENNA.

The guiding principles of university organization are:

- Subsidiarity: decisions are to be taken at the point of maximum competence, which normally means at the lowest hierarchical level. The principle of centralization shall only apply where this is reasonable from an organizational and economic point of view, and where the fulfilment of whole-university obligations is involved.
- Transparency: all members of the University of Vienna shall be kept as fully informed as possible of all management and decision-making guidelines, of the processes of decision-making, and of the decisions themselves.

- Innovation: the structures of the University should be in a state of continuous development, in order that the highest level of flexibility and openness may be achieved and an environment supportive of innovation may be created.
- Quality Guarantee: to ensure permanent high quality the use of resources will be subject to periodic scrutiny by means of evaluation and quality control measures. The use of materials is governed by the principles of thrift, value for money, and appropriateness.

The fundamental principle governing the internal structure of the University of Vienna is close team-based co-operation of all its members (teachers, learners and all other employees) rooted in a highly developed culture of information, communication, and debate.

As a large and complex organization, the University of Vienna is led by qualified, experienced and democratically accountable people guided by knowledge of modern business management within the framework of the University's guiding principles. In addition, mechanisms and instruments of management are under development to support those responsible for leadership at all levels.

The University of Vienna operates a planned and co-ordinated system of personnel management, and through its whole-university approach to personnel management offers continuing professional development to all colleagues, in order to support the optimum fulfilment of the University's responsibilities.

THE UNIVERSITY OF VIENNA AND THE PUBLIC SPHERE.

The University of Vienna, as a part of society, must take account of social problems and participate in social dialogue. Compared to society at large and its institutions, the University is an autonomous body, but views itself nevertheless as a partner in policy-making. Social developments should be examined with critical awareness, social problems confronted at both the local and the global level, and communication with the general public and the world of politics should be encouraged.

Through intensive interaction and communication with the social organs of the nation, the University views itself as a forum for the public discussion of all socially relevant topics and questions. It is fundamentally committed to participation in education policy-making.

The University of Vienna therefore undertakes to inform the public of teaching and study opportunities, and of the possibilities and results of research. It will accept and examine suggestions, initiatives and application "from outside" and assess the results of its research with regard to their relevance. (The problem of "theory-into-practice".) The University will make the best use of an active marketing strategy with the aim of attracting support from external sources.

University teaching and research constitute a reservoir of knowledge that should be made available to help in the solution of individual, social, and environmental problems. The University offers itself as a platform for a wide-ranging public debate at the scholarly level.

STRATEGIC PLANS

- Australian National University, Canberra, Australia
- University of Edinburgh, Scotland
- Technical University of Denmark
- Ceska Zemedelska Univerzita v Praze

Australian National University, Canberra, Australia (ANU Strategic Plan 1995-2004)

BROAD GOALS, OBJECTIVES, AND STRATEGIES

Goal 1: Engage in research, scholarship, teaching, and practice at the highest international standards

OBJECTIVES

International standing

- Ensure international and national recognition of excellence in research, teaching and scholarship of staff and students.
- Produce graduates sought by leading national and international research and teaching institutions, government, and non-governmental organizations, and industry.

Promoting excellence

- Foster a creative, innovative, and exciting research culture.
- Strengthen the nexus between teaching and research excellence.
- Promote high quality research, scholarship, and teaching which builds on and extends the special strengths and resources at ANU; draws upon strengths across a range of disciplines; and furthers interactions between the Institute of Advanced Studies and The Faculties.

Resources

- Diversify and enhance sources of funding to ensure continued, appropriate resources to support programmes of international standing.
- Provide the best possible facilities and develop outstanding technologies to support and foster excellent work.

- Maintain electronic and other advanced communication technologies at international best practice.

Ethical practice

- Maintain the highest standards of ethics in the conduct of research and teaching.

Strategies

- Enhance recruitment, development, retention and rewarding of outstanding staff and students through innovative policies and practices.
- Provide competitive promotions procedures which recognize excellence in research and teaching.
- Monitor institutional performance using appropriate international and national comparators.
- Develop means to disseminate innovative and excellent outcomes and practices within and beyond the University.
- Promote participation in international scholarly activities, foster visiting fellowships and exchange programmes for staff and students with leading overseas institutions.
- Enhance and monitor competitive distribution of resources across the University, and sustain funding of major equipment and information technology to ensure international competitiveness.
- By mid-1996, develop a broad approach to enhancing funding though a combination of educational and research endeavours (government grants, research grants and contracts, commercial, educational and ancillary activities, investments, fundraising) seeking to achieve non-government funding of 25 percent of the government operating grant across the University by the end of the decade.
- Assist strengthening of research in The Faculties through enhancement of existing programs, and introduction of new ones, including development of staff

skills in seeking competitive grant funds and mechanisms for funding excellence.

- Provide an information technology environment which will give rapid access to research, teaching, and administrative information.
- Maintain formal structures for prescribing standards of practice and monitoring research performance in relation to human and animal experimentation, genetic manipulation, and other significant ethical issues which may arise.
- Ensure, as a minimum standard, adherence to national guidelines for ethical standards in the conduct of research.

GOAL 2: Foster critical inquiry and an environment that strengthens Australia's capacity to undertake fundamental research and research of national and international importance

OBJECTIVES

Basic research and national importance

- Encourage and fund long-term research projects and better inform the community of the importance of this kind of work in maintaining Australia's international presence in cutting-edge research as well as in state-of-the-art teaching and learning, and the consequent benefits for Australian society as a whole.
- Be a leader in research and research training and the generation of ideas about the Pacific and Asian region and about Australia's role within that region.
- Enhance scholarly links with Asia and the Pacific across a broad range of fields of study including science and technology.
- Create opportunities for further research work and training the next generation of researchers.
- Ensure support for a national role in the country's research system based on the University's international

standing, concentration of discipline strengths, and resources.

Strengthening the country's research capacity

- Continue to be a major international performer in research and a resource for the Australian higher education system and for Australian research as a whole.
- Engage in collaborations and exchange agreements with institutions in Australia and overseas.
- Promote policy for national funding and concentration of national facilities in key areas in appropriate institutions.
- Expand the range of University-wide coordinating centres representing the University's work in Asia.
- Support the establishment of a National Asia Information Centre on the ANU campus.

Strategies

- Provide leadership for initiatives in establishing national facilities and infrastructure
- Ensure global access and rapid delivery of networked scholarly information and services at the ANU.
- Encourage the University's international visitors to visit other institutions in Australia.
- Host international conferences, collaborations, graduate summer schools, and collaborative PhD Programmes at the ANU and other locations in Australia.
- Continue to monitor and maintain targeted levels of expenditure for collaborative research with other Australian universities as a percentage of Institute expenditure.
- Monitor and support as necessary collaborative research with non-university institutions in Australia.
- Coordinate study of the Asia-Pacific region on a University-wide basis through the Asia Committee.

- Maintain and enhance the University's first-rate collection of material on the study of Asia and the Pacific.
- Maintain the unique concentration of disciplinary approaches to the study of Asia and the Pacific.
- Exploit the wide range of existing links with Asia in scientific disciplines.

GOAL 3: Provide a challenging and supportive environment in which staff and students can realize their potential and develop the skills and flexibility needed in a rapidly changing world.

OBJECTIVES

Highest standards of practice

- Be renowned for strengths in development and innovative use of information technology in all areas of its activity.
- Be renowned for open, efficient, and innovative management practices and administrative systems.
- Ensure appropriate processes for staff and student representation, to contribute to deliberative and decision-making processes.
- Increase opportunities for staff professional development and training.
- Ensure appropriate practices for pricing research and consultancies.
- Ensure efficient planning and use of space and facilities.
- Ensure mechanisms for monitoring performance and practices which recognize the distinctiveness of the ANU and decision-making and practices based on merit, fairness, and equity.

A supportive environment

- Ensure appropriate allocation of resources to support effective teaching.

- Provide a working environment for staff and students which is safe, healthy, attractive, and convenient to teaching, research, leisure, cultural, and community facilities.
- Ensure provision of a range of effective support services for staff and students.
- Create staff development and classification systems which recognize merit, performance, skills, and responsibilities, and encourage staff to realize their full potential in University employment.
- Ensure that all staff and students have the best possible access to library and other information technology resources.

Strategies

- Continue to provide appropriately coordinated support for a diverse national and international student population.
- Develop and implement a schedule for surveying students and graduates about their course experiences.
- Develop a plan, by mid-1996, for timely provision of building access for disabled students, staff and visitors.
- Maintain programmes to provide affordable living accommodation for students, visitors, and short-term staff from outside Canberra.
- Implement initiatives in the University's Landscape, Heritage, and Development Policy Plans.
- Continue to review at regular intervals all administrative areas across the University.
- Make a twofold increase expenditure on administrative staff training over the next five years to levels necessary to achieve a level of staff development consistent with the needs of the University, and its responsibility to provide for individual professional development.
- By mid-1996, ensure each area has a staff development programme addressing the needs of all staff in that area for appropriate professional development and training.

- Enhance performance and accountability measures, particularly for senior academic and administrative staff.

GOAL 4: Enhance the quality and diversity of the University's student intake

OBJECTIVES

- Increase recruitment and graduation of outstanding students.
- Recruit educationally disadvantaged students so that their representation in the student body is the same as their representation in the community in general and to provide appropriate support mechanisms.
- Continue to promote the ANU as a supportive provider of quality education for Aboriginal and Torres Strait Islander students.
- Increase the representation of students from outside the ACT and international students in the student profile.

Strategies

- Continue to provide special programmes targeting gifted students Australia-wide.
- Better inform target groups about the University and the quality of its courses.
- Promote the ANU widely in new and existing markets for international students.

GOAL 5: Provide undergraduate, honours, graduate, and postdoctoral education at the highest international standards.

OBJECTIVES

Undergraduate education

- Reduce staff-student ratios; increase numbers/ proportion of overseas students.
- Increase the share of funds going to: programmes focussing on the Asia-Pacific region; Australian studies,

including Aboriginal studies; professionally-oriented courses (engineering, law, internship programs, visual arts, and music); materials science; and premedical studies.

- Improve the quality of undergraduate teaching.
- Enrich educational programmes and classroom teaching by appropriate adoption of developments in computer assisted learning and multimedia.

Honours education

- Enhance study at honours level through encouragement of interaction between honours schools and cognate programmes in the Graduate School.
- Promote ANU as an outstanding centre, offering unique opportunities, for study at honours level.

Postgraduate education

- Maximize the effectiveness of the role of the Graduate School in graduate education, ensuring that the University remains pre-eminent in research training at graduate level in Australia.
- Provide conditions which maintain ANU as the national benchmark for quality and efficiency in research training.
- Create conditions which encourage the maintenance of high quality, innovative teaching of graduate coursework degrees.
- Collaborate with other institutions in provision of summer schools, training, and high level course work programmes for research students.
- Increase the numbers of PhD students recruited from top institutions around Australia and from overseas.
- Strengthen the role of the University as the focus of postdoctoral training in Australia, building on the disciplinary and inter-disciplinary excellence and resources at the ANU.
- Extend the range of postdoctoral opportunities across the University.

Strategies

- Increase funding, including from external sources, for honours and PhD scholarships to recruit outstanding students, recognizing the University's equity policies.
- Implement the outcomes of the review of the Graduate School.
- By mid-1996, develop a clear statement of University policy on availability and allocation of resources to graduate students.
- Develop budgetary mechanisms to encourage recruitment of outstanding students and their effective supervision.
- Through the Graduate School, develop strategies for recruitment and for provision of laboratory and other facilities with the aim of graduate students representing 30 per cent of the total student population by the year 2004.
- Build on successful collaborations with the public sector and industry to expand the University's programme of master degrees and internships involving field placements in state and Commonwealth government agencies and in industry.

GOAL 6: Provide higher education courses which foster excellence and creativity and are responsive to professional and community needs.

OBJECTIVES

Courses of quality

- Provide a challenging and stimulating learning environment based on curricula underpinned by the latest research and supported by the most appropriate technology.

Meeting needs

- Continue to produce graduates of distinction, motivated to provide leadership in society, and practitioners capable of taking a recognized place in their profession.
- Continue to offer and expand availability of course options which provide breadth and flexibility.
- Ensure courses are responsive to international, national, community and professional expectations.

Strategies

- Strengthen existing, systematic, departmental review practices to develop, by the end of 1996, a University policy and a schedule for review of faculties.
- Provide and maintain a high standard of teaching and learning technology resources and assist staff to make effective use of information and educational technology.
- Support and promote information technology literacy among students and facilitate learning by providing a range of information technology services on and off campus.
- Expand student exchange opportunities, particularly in Asia, Europe, and North America.
- Enhance and monitor student and peer evaluation of teaching.
- Ensure input to course development from appropriate constituencies, with explicit attention to generic skills and their assessment.
- Enhance the quality of teaching and learning processes and encourage teaching and staff development.
- Ensure systematic monitoring and review of teaching and learning outcomes.

GOAL 7: Encourage commitment to lifelong learning

OBJECTIVES

- Ensure that courses are intellectually rigorous, encourage independent learning, critical thinking and, through the cultivation of intrinsic interest, prepare students to be effective, lifelong learners.
- Offer a range of short courses focusing on continuing education activities in the professions and visual and performing arts.

Strategies

- Promote recognition by staff of the value of lifelong learning in delivery of education programmes.
- Investigate mechanisms, including the establishment of a Curriculum Committee, to ensure that curricula adequately develop in students generic skills of communication, information literacy and understanding of the context of a subject in its history and in the present world.
- In the regular departmental and faculty reviews, promote documented best practice teaching procedures which encourage lifelong learning.
- Promote lifelong learning principles in academic development programmes.

GOAL 8: Sustain international links, encouraging collaborations which provide mutual benefit to Australia and partner countries.

OBJECTIVES

International links

- Foster international exchange agreements with leading institutions and develop an effective international network of convocation members to promote collaborative work and other interactions.

- Ensure continuation of appropriate funding necessary to support the work of the ANU's staff and students at the high international standard which sustains international links.

Benefit to Australia

- Maintain and extend international visitor programmes in all schools, faculties, and centres and cooperate with complementary programmes in other Australian institutions
- Host international conferences attracting high quality visitors and assist staff and students to attend similar conferences.

Strategies

- Promote the University as a gateway to Australia for international collaborations and identify a percentage of funding for international collaborations to be set aside in school, faculty, and centre budgets.
- Endeavour to involve international visitors in national summer schools conducted by the University
- Promote support for location of international facilities in the ACT.

GOAL 9: Make the resources and expertise of the University accessible to other universities and research institutions - and to Australian governments, industry, and the wider community - in a manner which contributes significantly to national and regional education, culture, welfare, and economic development.

OBJECTIVES

Accessibility

- Promote collaborations and exchange agreements with universities and research institutions.
- Publish and promote research outcomes.
- Provide competitive access to research facilities.
- Responsive links

- Encourage links with industry through co-operative research and educational and innovative technology programmes.
- Be an exemplar for the potential of the creative link between basic and applied research as part of interactive commercial programmes.

A significant contributor

- Make optimal use of the University's resources and the campus environment with awareness of the University's location in the national capital, its local, national, and regional role, and links with Government and industry.

Strategies

- Better inform target audiences, especially key decision-makers in governments, public services, and the media, of the University's capacity and record as a national and international leader in research and teaching.
- Develop a coordinated outreach policy by mid-1996.
- Foster visiting fellowships, exchange agreements and secondments from other universities and research institutions, industry, and the public sector.
- Amend the University's consultancy policy to clearly provide for extended consultancies in appropriate circumstances.
- Encourage leadership and, where common objectives can be identified, participation in practices which link the University's research strengths with those of industry and government.
- Promote technology transfer and commercialization of research, particularly through the University's commercial arm, ANUTECH. Ensure that staff promotion policies recognize relevant outreach and commercial activities.
- Further investigate mechanisms, such as a development office and an alumni association, to encourage convocation members to maintain more active links with the University.

- Institute policies which encourage staff involvement in professional associations and activities, and membership of external research, education, and government policy committees, including review and grant-giving committees.
- Expand the range of courses involving field placements and internships with industry and government.
- Ensure industry and community membership of research and course advisory boards.
- Endeavour to disseminate research results more effectively to the wider community.

GOAL 10: Exercise an independent role in research and education related to public policy and other national issues.

OBJECTIVES

- Support outstanding research and teaching providing intellectual leadership in cultural, scientific, and socio-economic debates and policy development.
- Encourage involvement in policy related work and provision of policy advice.
- Promote informed debate on Australia, its institutions, and its international role, particularly in relation to the Asia-Pacific region.

Strategies

- Continue to sponsor major public lectures on national issues.
- Encourage and recognize contributions to public debate and commentary, and art, drama, and music criticism, through promotions criteria.
- Update and maintain the University's register of academic interests and outreach to provide information on, and promote access to, staff willing to contribute to public policy and debate.

- Encourage development of programmes which focus on public policy and national issues.

University of Edinburgh – Strategic Plan 2001-2005

MISSION

The University's fundamental mission is the advancement and dissemination of knowledge and understanding.

As a leading European centre of academic excellence, the University has as its core strategic objectives:

- To sustain and develop its identity as a research and teaching institution of the highest international quality;
- To provide an outstanding educational environment, supporting study across a broad range of academic disciplines and serving the major professions;
- To produce graduates equipped for high personal and professional achievement; and
- To enhance the scientific and cultural vision of society as well as its economic well-being.

As a great civic University, Edinburgh especially values its intellectual and economic relationship with the Scottish community that forms its base and provides the foundation from which it will continue to look to the widest international horizons, enriching both itself and Scotland.

UNIVERSITY GOALS

Excellence in Education

The University of Edinburgh will maintain and enhance its reputation and record for providing high quality teaching and learning of international class at undergraduate and postgraduate levels.

Educational Opportunity

The University of Edinburgh will provide access to its Higher Education programmes to students from a diversity of backgrounds on the basis of merit and encourage applications from able students from under-represented groups in society.

Postgraduate Activity and Lifelong Learning

The University of Edinburgh will enhance its position as a provider of postgraduate research training and continuing professional development opportunities, building on its broad research strengths.

Excellence in Research

The University of Edinburgh will maintain its position as the leading research university in Scotland and among the best in the United Kingdom and the World. It will carry out pure and applied research and research training at national and international standards, including research relevant to the economic, social and cultural wellbeing of Scotland and the United Kingdom.

Internationalization

The University of Edinburgh will maintain and enhance its position as a world class international university, stressing the benefits this brings both to the whole university community and to the Scottish nation.

Interaction with the Community

The University of Edinburgh will serve the Edinburgh, Scottish, and United Kingdom communities by contributing to cultural and community life, by promoting and contributing to intellectual discourse, including internationally, and by making the output from its research and scholarship available for transfer to the community.

SUPPORT FOR THE PROFESSIONS

The University of Edinburgh will maintain and enhance its support to a broad range of professional training and activity.

QUALITY MANAGEMENT

The University of Edinburgh will continually strive to be a well managed and governed institution, making efficient and effective use of its funding to meet the needs of students, staff and other stakeholders.

THE UNIVERSITY: AN OVERVIEW

The University is one of the largest universities in Britain, with a worldwide reputation for excellence in a wide range of disciplines. Over 20,000 students from the United Kingdom and overseas are currently registered with the University with a further 18,000 students enrolled on continuing education courses. 15,500 of its students are full-time undergraduates. The University offers about 350 undergraduate degree courses, of which over two thirds are joint honours or combination subjects. It employs more than 5,500 full-time equivalent (FTE) staff, of whom almost 3,000 FTE are academic and related staff, and has a turnover in excess of £275 million per year, including research grants and contracts worth approximately £70 million.

The University of Edinburgh is the leading research university in Scotland, and amongst the top ten in the United Kingdom. (...)

ENVIRONMENTAL ANALYSIS

Ongoing review of changes in the operating environment and sensitivity to these is a fundamental underpinning element of good strategic planning. Organizations must identify changes which provide new or improved opportunities to deliver on their mission and goals. Equally, they must identify those changes which will have a negative impact on performance if there is a failure to respond. This Environmental Analysis is one element of the University's approach to reviewing the environment. It is aimed at providing support to the Faculty and Support Groups for their internal planning, and to the Central Management Group (CMG) for reviewing these. It does not seek to convey any institutional view on public policy issues but merely to address their potential impact or importance to the University or to the HE sector generally.

The major features of the University's external environment which are impacting on its planning processes and its day-to-day activities are:

Funding Issues

i) Funding levels. Core funding per student has reduced continuously over the last 25 years. The improvement in recurrent funding in 2001/2002 is welcome although this is currently planned to last for one year only with likely real terms cuts resuming in 2002/2003.

ii) Uncertainties in the funding environment. The Research Assessment Exercise can, and has, led to significant step changes in institutional funding. Expected general increases in ratings in 2001 will put increased pressure on SHEFC's research resources. This will be particularly problematic for institutions such as Edinburgh with many units of assessment already rated 5 and hence with no prospect of increased funding from better performance. SHEFC's reviews of teaching and research funding methodologies add to institutional uncertainty.

iii) The very welcome reintroduction of significant capital funding for research through the Joint Infrastructure Fund (JIF) and its successor the Science Research Investment Fund.

iv) Increased earmarking of public funding in ways which restrict higher education institutions' managerial flexibility and the growing expectations that institutions will provide financial contributions to Government inspired initiatives from their own or third party funds.

v) Growing divergences between the United Kingdom's different national higher education systems especially in support of research and capital investment. An example is the different approaches being taken by the Higher Education Funding Council for England (HEFCE) and SHEFC on the provision of additional funds to higher education institutions to deal with pay falling behind market rates.

vi) The increased importance to the University of short-term restricted funding. Over the last decade, the proportion of the University's turnover from short-term research grant and contract funding has grown from 20 percent to 25 percent.

Societal issues

*i)*Increased regulatory burden. Institutions have to respond to new primary and secondary legislation as well as to new and more demanding auditing and assessment of activities by SHEFC and QAA. These can result in substantial real and opportunity costs.

ii) Growing expectations of higher education institutions from their multiple stakeholders. Government, government agencies, employers and students expect continually rising quality of provision in spite of falling funding, and have unrealistic expectations of the benefits of, for example, the potential contribution of ICT. There is increasing pressure on institutions to be more "relevant". Economic development is now clearly seen by society as part of institutions' core missions.

iii) The move to a mass higher education system. The participation rate for young people in Scotland now exceeds 50 percent, up from only 9 percent 20 years ago. Institutions are expected to meet the sometimes competing pressures from increased and more diversified demand (*e.g.*, from mature students), for increased quality, and for wider participation of less well represented groups.

iv) Increased financial pressures on students. The long-term trend of reduced state support for living costs, and the more recent shift to a loans-based system, and the requirement that students contribute to the cost of their tuition, whether deferred as in Scotland or upfront for students from elsewhere in the United Kingdom, are impacting on students and making part-time employment the norm rather than the exception. These pressures can affect student performance, impacting on the resources that need to be deployed by HE in order to maintain standards.

v) The impact of globalization. There is increasing international competition for overseas students. Increased reliance on income from overseas students makes institutions more vulnerable to exchange rate fluctuations. It may also be the case that overseas institutions increasingly see the United Kingdom as a potential market for their degree courses.

vi) Technological advances, in ICT and more generally. This allows improved quality of provision. It supports advances in research. However it comes at a cost in both cash terms and in the human resources which have to be deployed for initial creation, and perpetual updating and maintenance.

vii) The booming Edinburgh economy, impacting both on salaries and housing costs. This is making it increasingly difficult for the University to fill posts at all levels.

RESTRUCTURING THE UNIVERSITY

In summer, 2000, the Principal initiated a major programme of review of the University's activities with a view to investing in change to strengthen the institution in the medium to long term and to avoid it slipping into a period of slow decline. (...)

The University has agreed a long-term vision for academic restructuring principally based on increased consolidation of activities into larger transdisciplinary academic units. This strategy has the great benefit that larger size and reduced disciplinary boundaries facilitate more rapid evolutionary development within the larger units in response to both financial and academic pressures for change. It is however clear that there are departments lying outwith these emerging structures where mutually beneficial synergies with other University activities are at best weak, or where such interactions tend to be uni-directional to the benefit of the department in question. The University has now agreed criteria which will be used to decide whether continued support should be provided to such departments. These are:

Academic Considerations

- student demand (undergraduate and postgraduate);
- research performance;
- international competitiveness.

Academic Coherence

- mutually beneficial synergy with other areas;
- strategic significance in the context of Scottish and United Kingdom provision (which will require particular attention where Edinburgh is the sole provider in a subject area);
- the need for academic balance across a broadly based University.

Resource Considerations

- the cost and availability of the resource necessary to support the activity, including accommodation;
- the financial consequences of reducing or ceasing an activity.

External considerations

- the demands of external accrediting bodies;
- fulfillment of external service commitments;
- and contribution to the wider community, in political, social and cultural ways, at local national and international levels.

The University also intends to progress the development of support for teaching and learning in the new environment, particularly with regard to the use of ICT.

Some initial specific decisions and restructuring are already emerging. New interdisciplinary departments have been created by mergers in social and political studies and in management and accounting. A major restructuring of non-clinical activities in medicine is under way and the University has decided to cease teaching undergraduate Agriculture, a subject area with major national over-provision, which was becoming unsustainable. The University has also agreed that it needs to simplify and standardize its academic systems, practices, and procedures as far as is possible, for example in regard to curricular structures, admission systems, examinations and assessment, and postgraduate matters. (...)

INDIVIDUAL GOALS

Excellence in Education

The University of Edinburgh will maintain and enhance its reputation and record for providing high quality teaching and learning of international class at undergraduate and postgraduate levels.

The Current Position

The University is the largest in Scotland and one of the largest in the United Kingdom. It has 19,000 FTE undergraduate students on its approximately 350 undergraduate courses. The University has flexible curricular structures, with more than two thirds of its programmes being joint honours or combination subjects. It provides teaching in a very broad range of subjects in its 9 faculties. The University is responsive to changing needs and has recast its regulations to allow direct entry to the second year of many courses and to permit early exit to suit student needs and abilities. (...)

The University plans broadly to maintain undergraduate student numbers at current levels, reflecting Government policy against expansion.

Objectives

In pursuing its goal of Excellence in Education the University will seek to:

- Maintain the quality of its provision, and enhance this where possible within resources constraints.

- Instill in all staff the importance of quality teaching by devolving responsibility for this to academic departments, but with central support and direction, *e.g.*, in the systematization and dissemination of good practice techniques.
- Provide a high quality learning and support environment for its students.
- Support the Edinburgh University Students' Association and Sports Union in providing access to high quality representational, social, and sports facilities and services for students.
- Sustain its breadth of provision, except where resources are insufficient to provide quality teaching.
- Offer flexible curricular structures to allow broad student choice and to develop more multi-disciplinary programmes, in line with the traditions of Scottish higher education.
- Reduce the costs of teaching, subject to the need to maintain quality.

Ongoing Strategies

The University will continue to:

- Provide teaching of a level and quality appropriate to our student intake, in the distinctive context of a strong research environment.
- Review structures and curricula to maintain their articulation with school curricula as these are revised, and in particular to reflect the Higher Still developments.
- Enhance flexibility in student learning opportunities at Faculty level through changes to the organization of courses, programmes and awards, *e.g.*, by allowing increased direct entry to the later years of degree programmes.
- Ensure the relevance of curricula, *e.g.*, in areas such as students' personal transferable skills, career planning skills, and IT literacy, and in response to technological

change and in consultation with professional and statutory bodies.
- Promote its internal Teaching Programme Review (TPR) system by investing further resources in this, refining the programme and carrying it forward to new areas.
- Provide high quality training for academic and other staff involved in teaching, at the beginning of and throughout their careers. (...)

Quality Assurance

It is the duty of the University's Senate to assure itself that the quality of teaching and learning offered to students is high. It does this through the Senatus Quality Assurance Committee which is chaired by the Director of Quality Assurance, a member of the academic staff, and is charged principally with ensuring that each faculty has good procedures for monitoring the experience of students in all its courses: recruitment, teaching, assessment, guidance and so on. It also organises five-yearly reviews of all the University's teaching programmes by teams that include two experts from outside the University.

A further duty of the Committee is to prepare the University for external scrutiny, principally by the Quality Assurance Agency for Higher Education which has this responsibility throughout the UK. The Agency conducts regular "subject reviews" of individual programmes as well as "institutional reviews" of every university and college. It has also recently introduced a number of other guidelines including a Code of Practice, a framework for qualifications awarded by universities and a set of 'benchmarks' that describe the minimum standard that should be achieved by an Honours graduate. Edinburgh University is striving to comply with these guidelines and has been a pioneer in subject review, but hopes to cooperate with the Agency and the Funding Council in reducing the bureaucratic burden that these processes can impose.

Assurance of quality is a minimum; more important and more challenging is to ensure that quality is continuously enhanced. The University is progressing rapidly here by, for example, introducing teaching organisations specifically charged with delivering courses over a wide area and by improving many of its procedures for staff development and training. It is also preparing a strategy document for teaching and learning outlining its vision for progress in the future.

SPECIFIC PLANS FOR 2001 AND BEYOND

The University will:

- Support its academic strategy by developing a comprehensive Teaching and Learning Strategy, which includes a review of curriculum structures, a Strategy for Quality Enhancement and consideration of the QAA Code of Practice and the associated QAA/Universities United Kingdom recommendations on Progress Files.
- Undertake teaching programme reviews in Archaeology, Divinity, History, Law, and Social Policy.
- Be reviewed by the Quality Assurance Agency in Accountancy, Anthropology, Engineering, English, Geography, Philosophy, Politics, and Sociology.
- Prepare for the QAA Institutional Review scheduled for Autumn 2002.(...)

Educational Opportunity

The University of Edinburgh will provide access to its Higher Education programmes to students from a diversity of backgrounds on the basis of merit and encourage applications from able students from under-represented groups in society.

The Current Position

The University is committed to the principles of educational opportunity and wider participation and plans to expand on existing access provision and widening participation initiatives. In common with the other ancient Scottish Universities, the University also has a tradition of a very flexible undergraduate curriculum structure, in which a wide range of subject combinations are possible. (...)

Objectives

In pursuing its goal of Educational Opportunity the University will seek to:

- Pursue its admissions policy based on merits, abilities and potential, accepting those who have the capacity to benefit from study at degree level and to achieve the stated outcomes of its degree programmes.

- Ensure that admissions decisions are as fair and objective as achievable within the constraints of selecting from many applications against constrained intake numbers.
- Ensure that students with disabilities have access to appropriate facilities and support to enable them to participate fully in the mainstream of academic life.

Ongoing Strategies

The University will continue to:

- Encourage admissions officers to look for evidence of potential beyond the traditional indicator of school leaving examination results.
- Analyze the composition and origins of its student body and take action to correct imbalances where appropriate. (...)

Postgraduate Activity and Lifelong Learning

The University of Edinburgh will enhance its position as a provider of postgraduate research training and continuing professional development opportunities, building on its broad research strengths.

SPECIFIC PLANS FOR 2001 AND BEYOND

Widening Participation

The University has over some years taken active steps to widen the range of backgrounds amongst students participating in its programmes, having initiated a scheme which gave rise to the collaborative Lothians Equal Access Programme for Schools (LEAPS) programme. We monitor the educational, social, geographic and ethnic origins of our intake and take this analysis down to the level of faculty. The data we obtain are compared with published benchmark figures. We recognise an under-representation of students from the state sector of school education and from further education, an under-representation of certain ethnic minorities, of social classes IIIM, IV and V, and of students from localities with low participation rates. We observe significant differences in the performance indicators of different faculties, which call for different measures to address the issues relating to participation. We find an under-representation of females in engineering and of males in Education (primary). Many of these imbalances arise from the pattern of application to the University. Our Schools and Colleges Liaison Service has an active programme aiming to stimulate application from schools in the state sector and from further education colleges. In addition to our active participation in collaborative programmes such as LEAPS, SWAP (East), Girls get SET, and the Fife Wider Access Programme, we have secured private sector funding to work towards widening participation in courses leading to professions including law and medicine (Pathways to the Professions). We are seeking through discussion with FE Colleges to improve the HNC/HND progression route. We are also developing admissions procedures designed to take more account of the role of the school attended in the qualifications offered at the time of application to the University. A programme of measures, including a student mentoring scheme, has also been initiated aimed at improving retention and progression of students whose background may place them at risk of discontinuation.

Our target is to converge on benchmark figures for participation over a period of around seven years, recognising that many of the inhibitions on application by suitable students are deep seated and will not be easily changed. Moreover, many significant factors are outwith the control of the University. For Edinburgh, given generally high levels of applications and competitive entry requirements which favour applicants from schools with high examination performance, developing inclusive policies and meeting the targets we set will be extremely challenging.

Programmes of student tracking have been initiated with SHEFC funding under initiatives originated earlier. Our student record system is developed to ensure that we have appropriate data for such tracking.

The overall strategy of the University aims to provide a challenging teaching and learning environment, strongly influenced by research activity, for students from whatever origin who have the capabilities to benefit from it. We believe that our proposals for widening participation are in accord with that policy since we are confident that students of the necessary aptitude and commitment are to be found in all classes, ethnic groups and locations of society.

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The Current Position

The University continues to be the largest provider of research postgraduate education in Scotland. (...)

OBJECTIVES

In pursuing its Postgraduate Activity and Lifelong Learning goal, the University will seek to:

- Enhance its position as a provider of postgraduate research training of the highest quality.
- Provide research students with a stimulating graduate research environment, expert supervision, and opportunities for student-staff collaboration.
- Increase research postgraduate numbers.
- Improve the facilities available to research postgraduate students.
- Expand its portfolio of taught postgraduate courses where this can be done cost-effectively. (...)

ONGOING STRATEGIES

The University will continue to:

- Provide research training of the highest quality, including training in generic skills, in an environment of research of an international standard. (...)
- Explore the possibilities for full-cost recovery taught postgraduate courses. (...)

SPECIFIC PLANS FOR 2001 AND BEYOND

The University will:

- (...) Develop parts of the existing Archaeology course to enable it to be delivered by on-line learning.
- Launch a pilot on-line registration system for Continuing Education.

Excellence in Research

The University of Edinburgh will maintain its position as the leading research university in Scotland and among the best in the United Kingdom and the World. It will carry out pure and applied research and research training at national and international standards, including research relevant to the economic, social, and cultural wellbeing of Scotland and the United Kingdom.

The Current Position

The University is a leading research university providing over 24 percent of all Scottish Higher Education R&D, and in total approximately 10 percent of the entire Scottish R&D effort. (...)

Objectives

In pursuing its goal of Excellence in Research, the University will seek to:

- (...) Establish and maintain high quality research facilities.
- Maintain an academic environment characterized by excellence across a wide range of disciplines and offering unique opportunities for inter-disciplinary work.
- Increase the use by industry and other external organizations of its technology, research, and expertise to create social and economic benefits, while generating income to support research and education.
- Support research by both staff and students through provision of a support environment with access to an exceptional computing and communications infrastructure and a major research library.
- Encourage collaborative research where this enhances the University research profile and enriches the work of its academic staff.
- Encourage work of an international standard.
- Increase postgraduate research student numbers.

ONGOING STRATEGIES

The University will continue to:

- Allocate resources selectively to sustain and build upon existing strengths and promote improvements in areas of relative weakness.
- Ensure that barriers to multi-disciplinary activity are reduced or removed. (...)

SPECIFIC PLANS FOR 2001 AND BEYOND

The University will:

- (...) Launch the new Career and Professional Review scheme, in continuing support of the development needs of contract research staff.
- Further develop support infrastructure through Edinburgh Research and Innovation, and its Commercialization Strategy, with specific targets for that unit for research volume, disclosures, patents, licences, spin-out, and start-up companies. (...)

Internationalization

The University of Edinburgh will maintain and enhance its position as a world class international university, stressing the benefits this brings both to the whole university community and to the Scottish nation.

The Current Position

The University of Edinburgh has had an international perspective since its earliest days and an international reputation for at least three of its four centuries of existence. The University recognizes the current moves towards "globalization" around the world, which encompass the Higher Education sector. (...)

OBJECTIVES

In pursuing its goal of Internationalization the University will seek to:

- Be a great international institution of science and learning, but in the context of serving Scotland and the United Kingdom.
- Promote a two-way cultural exchange between Scotland and the rest of the world.
- Promote student exchanges between Edinburgh and overseas higher education institutions, to the benefit of the individual students and the community as a whole.
- Provide a high quality experience for overseas students attending Edinburgh.
- Maintain and enhance its overseas student numbers.
- Promote international collaboration in research.
- Attract staff of international quality, whether British or overseas.

ONGOING STRATEGIES

The University will continue to:

- (...) Provide the necessary support mechanisms to allow overseas students attending Edinburgh to gain the most they can from the experience by undertaking a number of actions in priority areas: admissions, accommodation, induction and study skills, support for Student Services.
- Provide support from the University International Committee to assist Faculty Groups and departments in their overseas student recruitment efforts, by identifying target markets and clarifying future recruitment activities.

SPECIFIC PLANS FOR 2001 AND BEYOND

The University will:

- Implement the recommendations from its review of its international strategy.

- Introduce scholarships for overseas students, in specific subjects and [for] specific geographic areas.
- Seek accreditation from the American Veterinary Medicine Association for its undergraduate Veterinary Medicine programme, thus offering stimulus to recruit students from international sources.

Interaction with the Community

The University of Edinburgh will serve the Edinburgh, Scottish and United Kingdom communities by contributing to cultural and community life, by promoting and contributing to intellectual discourse, including internationally, and by making the output from its research and scholarship available for transfer to the community.

THE CURRENT POSITION

In addition to the University's major impact on the local community as one of the largest employers in South-East Scotland, it makes an enormous impact on the cultural and community life in Edinburgh and Scotland. It provides a source of expert advice, both through consultancy services and unpaid contributions through service on public bodies and contributions to the media. (...)

OBJECTIVES

In pursuing its goal of interacting with the Community, the University will seek to:

- Support its staff and students for current and future contributions to society, including the leadership role expected of graduates.
- Add to the intellectual capital of the nation.
- Provide cultural services to the community and share its cultural heritage through public access to concerts, libraries, museums and galleries, sports facilities, and University buildings.

- Encourage the involvement of staff in public and professional bodies and organizations.
- Make staff available to provide expert contributions to public debate. (...)

ONGOING STRATEGIES

The University will continue to:

- Support public debate and policy development, *e.g.*, through the Governance of Scotland Forum and through provision of advice to politicians, civil servants, and the media. (...)

SPECIFIC PLANS FOR 2001 AND BEYOND

Contributing to the Public Policy Debate in Scotland

The University and its staff are playing their role in informing public policy debate in Scotland in different spheres and in different ways:

- Providing evidence from our internationally renowned research that can contribute to public policies developed in the Scottish Executive and the Scottish Parliament;
- Making our expertise available to Parliamentary Committees as advisers and witnesses;
- Enhancing dialogue on important areas of public concern by organising conferences and other events for policy-makers and drawing on experience in other countries throughout the world;
- Hosting briefing sessions for politicians to help keep them well-informed and updated on policy matters;
- Working collaboratively with the Scottish Parliament Information Centre (SPICE);
- Supporting links between business and the politicians through the Scottish Parliament and Business Exchange;
- Educating and training students in the fields of public policy and governance;
- Liaising with the Parliament in supporting Student Internships with politicians and their research staff.

In all of these Scotland-wide activities, as well as through our good relations with the City Council and others, the University is a vital resource in the local community.

Scottish Politics are also of major importance to Edinburgh University Press, the publishing subsidiary of the University. The Press publishes books which appeal to both an academic and a more general readership and believe that it is ideally placed to contribute to the debate surrounding the new Scottish Parliament.

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Support for the Professions

The University of Edinburgh will maintain and enhance its support to a broad range of professional training and activity.

THE CURRENT POSITION

The University provides support for a broad range of professions including Medicine, Veterinary Medicine, Law, Engineering, Teaching, and the Church. (...)

OBJECTIVES

In pursuing its goal of supporting the professions, the University will seek to:

- Provide high quality relevant curricula which meet the accreditation requirements of professional bodies and which prepare graduates to take a leading role in their chosen profession.
- Provide professional graduates with opportunities for postgraduate education, including research training.
- In selected areas, provide graduates with opportunities for ongoing professional development.
- Work with professional bodies to develop the professions.
- Encourage staff involvement in professional bodies and associations.

ONGOING STRATEGIES

The University will continue to:

- Consult with employers and professional bodies to ensure continued relevance and quality of curricula, for example by reviewing professional curricula in partnership with professional bodies as appropriate. (...)

SPECIFIC PLANS FOR 2001 AND BEYOND

The University will:

- (...) Introduce new programmes leading to Chartered Engineering and Incorporated Engineering status, in collaboration with Napier University and Heriot-Watt University. (...)

Quality Management

The University of Edinburgh will continually strive to be a well-managed and governed institution, making efficient and effective use of its funding to meet the needs of students, staff, and other stakeholders.

THE CURRENT POSITION

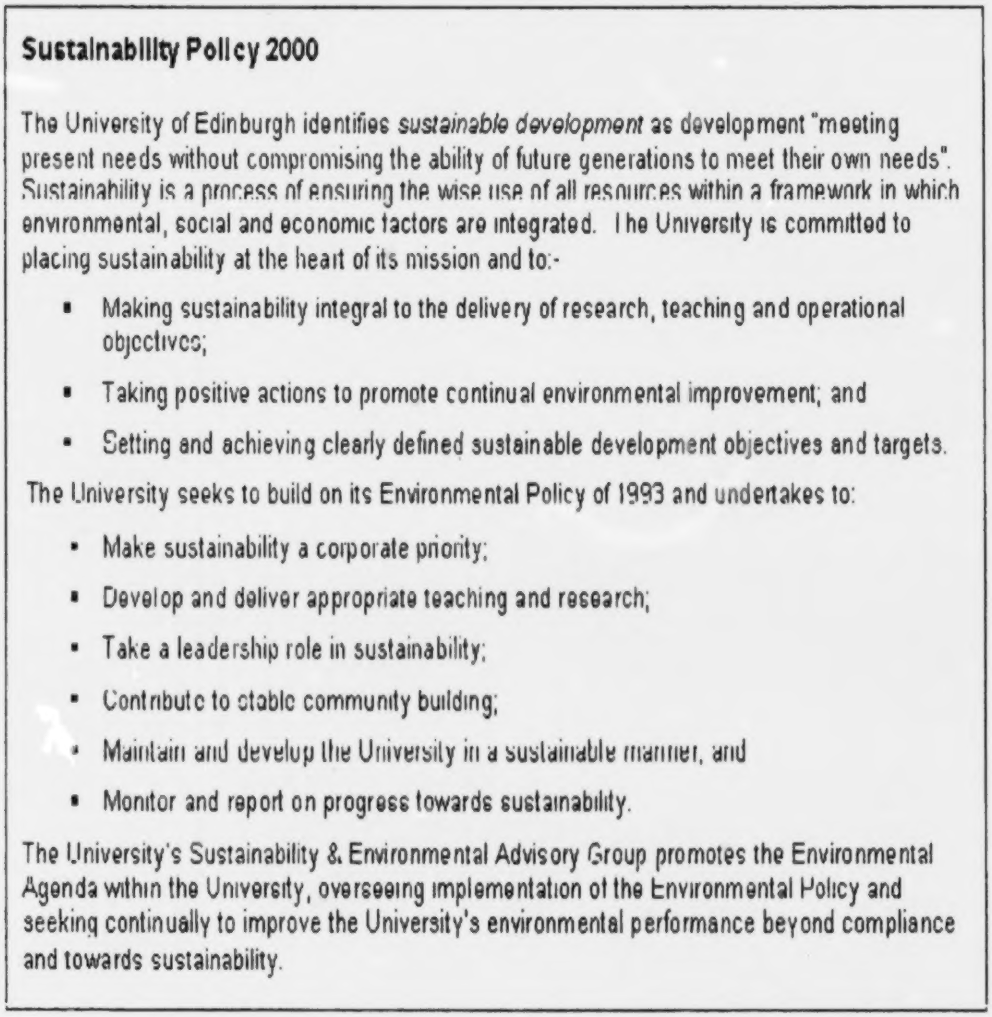
High quality and effective management provides a necessary underpinning for the University's core teaching and research goals. In this context the University commenced a major restructuring programme in 2000, to ensure the continuing success of the University. (...)

OBJECTIVES

In pursuing its goal of Quality Management, the University will seek to:

- Support and develop the processes of management and governance within the University, aiming to exhibit best practice. (...)
- Increase substantially its income from non-government sources.
- Provide high quality management information systems that support its academic and management functions.
- Be an excellent employer, committed to staff development, ensuring equal opportunities, and creating a sustainable staffing profile that meets institutional needs. (...)

- Be responsive to legal and regulatory change, for example, by complying with legislation on health and safety and access for disabled people.
- Encourage an awareness of environmental issues among staff and students, and behave in an environmentally responsible fashion.
- Build long-term links with alumni, encouraging their deeper involvement with the University.



Sustainability Policy 2000

The University of Edinburgh identifies *sustainable development* as development "meeting present needs without compromising the ability of future generations to meet their own needs". Sustainability is a process of ensuring the wise use of all resources within a framework in which environmental, social and economic factors are integrated. The University is committed to placing sustainability at the heart of its mission and to:-

- Making sustainability integral to the delivery of research, teaching and operational objectives;
- Taking positive actions to promote continual environmental improvement; and
- Setting and achieving clearly defined sustainable development objectives and targets.

The University seeks to build on its Environmental Policy of 1993 and undertakes to:

- Make sustainability a corporate priority;
- Develop and deliver appropriate teaching and research;
- Take a leadership role in sustainability;
- Contribute to stable community building;
- Maintain and develop the University in a sustainable manner, and
- Monitor and report on progress towards sustainability.

The University's Sustainability & Environmental Advisory Group promotes the Environmental Agenda within the University, overseeing implementation of the Environmental Policy and seeking continually to improve the University's environmental performance beyond compliance and towards sustainability.

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ONGOING STRATEGIES

- Review University, Faculty Group, and Support Group plans annually, to ensure that these continue to support its mission and delivery of its long term goals. (...)

SPECIFIC PLANS FOR 2001 AND BEYOND

The University will:

- Review the management structures and systems within the Administrative and Student Services Support Group.
- Review the New Planning and Resource Allocation System, based on lessons learnt from the first year of implementation. (...)
- Decrease the proportion of staff costs met from core salaries budgets by increased recharging to research grants and contracts. (...)

The Planning and Resource Allocation Process

The University introduced a new planning and resource allocation system (NPRAS) in the 2000-2001 planning round to determine budgets from 2001-2002 onwards. This was developed after a lengthy and major review of its existing planning and resource allocation processes. The major aim of the review was to develop resource allocation processes which were more sensitive to Faculty Groups performance in generating income for the University.

Under NPRAS Faculty Group expenditure budgets consist of two components. One, the core component, equals the budget at the point of introduction of the new system and will normally remain unchanged over time. This will facilitate relative stability of allocations. The other, the marginal component, is based on the Faculty Group's projections of attributable income, less levies for changes in corporate and Support Group budgets. Faculty Group budgets will be adjusted in-year for performance in generating those elements of attributable income under Group control, largely tuition fee income.
<www.planning.ed.ac.uk>>

Technical University of Denmark (DTU)

DTU: A UNIVERSITY IN SOCIETY

DTU considers it important to point to new paths that actively contribute to the solution of problems relating to society as a whole, to people as individuals, and to natural resources. We think it important that our graduates, using their specialist knowledge, participate actively in society's ongoing debate on the many aspects of technological progress, and by their activities within and outside the university environment participate in pointing to new solutions and ways ahead.

DTU aims to maintain its standing as a national technological university renowned for high standards, and by a careful choice of forms of instruction and examination to ensure that students acquire the breadth of competency for which DTU graduates are noted.

The present Strategic Plan '98 is the beginning of a process. In the period covered by the plan, from now until 2001, DTU will be carrying through a paradigm shift in its educational programmes and instruction. By working in terms of learning rather than teaching, we will bring to completion the transformation that began with the incorporation of the Engineering Academy of Denmark and Elsinore College of Engineering and create a university ranking with the best in the world.

Strategic Plan '98 is the expression of a joint effort at DTU. During the coming year, the process will ensure that everyone at the University feels bound by this undertaking, so that visions and goals take form in specific actions.

One of the main purposes of DTU is to produce graduates with the competencies in engineering science that are in demand by, for example, high-technology companies. This requires training based on thorough mathematical and scientific insight supported by competent, internationally oriented research environments in the various specialized technical fields.

Product development and innovation are central to future commercial competition both nationally and internationally. Global changes necessitate continued development of our educational programmes, and we must maintain and further develop environments for education and research of an international standard in the fields of the engineering sciences and related disciplines.

STRONGER FOCUS ON TEACHING AND CONTINUED STRONG FOCUS ON RESEARCH

In Strategic Plan '98, DTU has decided to concentrate its efforts to continue educational quality development, while maintaining the research focusing established by Strategic Plan '95.

The ability of students to work in interdisciplinary teams must be strengthened in order to enable them to function effectively and appropriately in their future working lives.

The future will demand a higher level of ability to communicate about technically complex matters, both to members of other professions and to lay people. Obtaining the maximum benefit from collaboration depends on the ability to communicate available knowledge effectively and competently.

Our graduates must be familiar with advanced application of IT, regardless of whether their specialization lies within that area or elsewhere. IT must therefore be included as an integral part of the programmes.

Training in the use of foreign languages must be integrated into the students' instruction in their chosen subjects, to prepare them for work in an increasingly international commercial and industrial environment. Greater mobility and increased collaboration with fellow professionals from other parts of the world make language skills essential.

Students must acquire the ability to put technology and technical science into a societal context. Thus, knowledge and understanding of the external environment, the working environment and social conditions in general must receive greater emphasis in the instruction given and not just separately in the form of specific courses, but integrally in the subjects studied.

Business economics and company management will also be included in relevant subject contexts in the educational programmes of DTU.

Students must be made to realize that to be awarded an academic title is not the end of the learning process. Technological and social progress require that all graduates should constantly keep abreast of developments in their own and other fields.

Postgraduate education must result in a clear raising of knowledge levels and building further upon existing competencies. A principal area of endeavour will be postgraduate education within the structure of ordinary university studies, for example in the form of the two-year "superstructure" programme which leads to the degree of MSc and is open to all holders of a Bachelor's degree in engineering. Other supplementary and continued education activities will also be undertaken.

Technological progress is an integral part of the development of society and is thus relevant to both sexes. DTU is therefore actively recruiting more female students (at present 20 per cent of new students are women).

DTU regards it as a natural tool of development and quality assurance in research and education to participate in international evaluations. This includes publication of research results in peer-reviewed international journals and participation in international research and educational cooperation.

THE CHANGING STAFF AGE PROFILE, STRATEGIC INITIATIVES, AND APPOINTMENTS POLICY IN THE PERIOD 1998-2001

Companies' continuing need for well qualified technologists makes great demands on DTU's ability to maintain and develop its educational/research environments so that they can both attract the requisite number of students and also ensure that students receive an education that will enable them to hold their own in both Danish and international contexts.

With the existing age distribution and current funding models, the necessary updating and ongoing development of the instruction provided by DTU will be dependent on the University's ability to attract funds for major strategic initiatives.

We believe that the Research Centres are important here, partly because they permit a smooth generation change. DTU's policy is that consolidation of strategic initiatives should take place gradually, as the areas concerned prove to be viable. DTU will continue to apply the Centre concept in the strategic development of focus areas in research and teaching.

As an educational establishment, DTU attaches great importance to ensuring that its staff have the opportunity of ongoing supplementary and continued training in teaching methods. DTU has therefore set up a Centre for Didactics and Teaching Methods, the task of which is to co-operate with the management and departments to give DTU employees scope and inspiration for innovation and quality development in the teaching.

DTU'S DEGREE PROGRAMMES

DTU will retain its MSc and BSc programmes, including those in Food Science and Technology, as separate self-contained programmes. DTU will enter into strategic alliances with other educational establishments, and we believe that such alliances will become increasingly important. Alliances with other establishments are an important tool in facilitating transfer of academic credits when students switch courses, and can increase possibilities for creating combination programmes.

There will continue to be an interplay between the three degree programmes offered at DTU. This will be achieved by a system of individual study plans allowing students to transfer academic credits and enroll in "superstructure" programmes.

The BSc Programme

DTU produces a fully trained engineering professional with a distinct technical profile in three-and-a-half years. Over the coming period, DTU will continue to strengthen the development of programme content, ensuring that the BSc programme will retain its standing as a short, high-quality training in engineering science. During the coming three years, DTU will work to:

- manage the coming change in staff age profile at the four BSc departments and in such a way as to ensure that it will be possible to create research and development environments at the departments;
- ensure that DTU's BSc programme continues to be characterized by a thorough training in the basic disciplines, on which the subsequent specialization is built;
- develop study plans that have the necessary flexibility to satisfy future demands;
- further develop the concept of housing all activities of each of the main branches of engineering in a dedicated building, so that it will continue to further the achievement of the objectives DTU sets for its BSc programme.

The MSc Programme

DTU's intention is that the MSc programme should lead to a degree which is a professional qualification in itself, and can also serve as the basis for doctoral studies. DTU will:

- ensure the thoroughness of technical competence imparted on the foundation of the basic scientific disciplines;
- ensure a close correspondence between the components and stages of the study plan;
- develop a number of distinct final MSc specialization options. These must reflect technological progress in the relevant fields and the needs of potential employers.

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- formulate clear expectations regarding the proper progress of the students' learning process at all stages of the programme.

The PhD Programme

DTU's PhD programme is a central part of the University's educational and research activities. DTU wishes its training of researchers (doctoral studies) to remain a characteristic of its research environment. DTU will therefore:

- ensure that the PhD programmes will continue to establish a high potential for further progress in the relevant field;
- ensure that the most able Master level graduates from Denmark and abroad will continue to be attracted;
- maintain and develop the beneficial collaboration with commerce and industry on the Industrial Researcher programme;
- develop instruction in the PhD programme in such a way as to continue to live up to DTU's quality requirements.

DEVELOPMENT OF EDUCATIONAL CONTENT AND TEACHING

Teaching in all DTU's programmes should be characterized by a high scientific standard and quality. Drawing on DTU's strengths in the basic scientific disciplines and in accordance with the objectives of Strategic Plan '98, it must be ensured in the coming period that:

- the programmes give scope for study in depth;
- the programmes continue to give the students a basis on which to take in new knowledge;
- forms of education and examination are developed which train students in requisite ancillary skills within communication and collaboration;
- a clear concept is developed of what DTU considers to be quality instruction.

THE UNIVERSITY ENVIRONMENT

DTU has approximately 6,000 students. Their experience of DTU must be that of a good educational establishment offering scope for building up social as well as professional contacts as a basis for personal and vocational development. DTU will play its part in:

- creating a framework within which students can seek personal and social challenges as well as challenges related to their chosen field of study, that will benefit them in their future life;
- ensuring that students, as a part of the educational programmes, are integrated into the research and development environments in DTU's thirty-three departments;
- ensuring the best possible conditions for contacts between students and potential employers to develop through collaboration, work placements, projects, etc.;
- promoting departmental environments where students and staff socialize and form useful contacts;
- setting up the framework for a broad range of associations, clubs, and groups that through their activities contribute to university life.

THE PHYSICAL FACILITIES

Given that DTU's buildings are 25-35 years old, detailed objectives now need to be formulated concerning how DTU can in the coming ten-year period:

- maintain physical facilities that are up to date and adapted to the research and development activities carried out;
- maintain physical facilities that are adapted to the teaching and working methods employed in the programmes;

- ensure that the experimental teaching facilities, which are one of DTU's strengths, continue to bear eloquent witness to the high quality of the programmes;
- ensure that the physical working facilities and environment for students and staff are of the highest standard.

It is the task of the Technical University of Denmark (DTU) to create, sustain, and develop environments for education and research of an international standard in the fields of the engineering sciences and related disciplines.

The University wishes to continue to be able to produce graduates with the broad spectrum of competencies in engineering science that high-technology companies require. Undergraduates should therefore receive thorough mathematical and scientific training backed up by competent, internationally oriented research environments. (...)

THE CRITERIA OF SUCCESS OF DTU

- That DTU graduates have good standing in a competitive job market and are easily able to find employment appropriate to their qualification;
- That teaching at DTU is at a high scientific level and is felt by teachers and students to be interesting and inspiring;
- That DTU is able to attract a large number of motivated and able students of both sexes;
- That the BSc, MSc, and PhD programmes at all times live up to the quality requirements applied by DTU to its educational activities;
- That DTU research results are published in international journals and/or result in patents;
- That DTU development activities generate new and better products and production methods, or lead to the establishment of new businesses;
- That DTU research/educational environments interact widely with research environments at other institutions

and with commerce and industry on a national and international level through collaboration on projects and exchange of researchers and instructors;
- That DTU continues to be able to attract substantial external funding (>30 percent of total turnover), especially within its strategic focus areas.

On the research side, an important tool in the ongoing assessment of whether DTU's research performance lives up to the targets we have set is the list of thirteen criteria for success in research.

On the teaching side, the "thirteen expectations on the quality of instruction" will serve to forge a similar tool to ensure the development and quality of instruction.

THE ROLE OF DTU IN SOCIETY

As a university of technology, DTU considers one of its tasks to be to point to new paths of development that can actively contribute to the solution of problems relating to society as a whole, to people as individuals, and to natural resources. We therefore consider it important that our graduates participate actively in society's ongoing debate on the many aspects of technological progress, and by their activities both within and outside the university environment take their place at the forefront in pointing to new solutions.

People are what matters and technology should not be pursued for its own sake. It is an important aspect of the engineering professional's work to solve specific technical problems as encountered in people's everyday lives. (...)

For DTU, what is important is that, whatever their background, applicants have the motivation to complete a higher education in technology and have demonstrated the ability to take in theoretical information. The latter requirement is expressed in the pass-mark required in the entrance examination.

Technological progress is an integral part of the development of society and is therefore relevant to both sexes. The University must reflect the development of society, which it can only do if it draws on the competencies of both the sexes. DTU is therefore working to achieve an increase in the proportion of female students (at present 20 percent). (...)

FROM STRATEGIC PLAN '95 TO STRATEGIC PLAN '98

In 1995, DTU presented, for the first time a plan designed to cover the University's main activities both on the teaching and on the research sides. (...)

Strategic Plan '95 laid down guidelines and set targets which could be worked towards by students, staff, and management. The main emphasis in the plan was the focusing that was to take place on twelve focus areas of technology and on the associated basic disciplines of mathematics, physics, and chemistry. This established an important point of reference for decisions on activities and resources in the ensuing period.

The main elements in Strategic Plan '95 can be summarized as follows:

- focus on twelve principal research areas;
- gathering activities together in larger and fewer departments;
- internationalization of teaching and research activities;
- a new system for setting staff target figures and a new method of determining the Staff-Student Committees' rights to requisition resources for student instruction.

One of the results of putting Strategic Plan '95 into practice was a new departmental structure for the MSc departments. The object was to gather the departments into larger and stronger units in order to support the research priorities and create the necessary organizational demarcations. (...)

On the teaching side, in 1996 a new system was introduced for the Staff-Student Committees' right to draw on teaching. The new system makes it easier for the departments and those responsible for arranging instruction to organize teaching in relation to the available resources, and has made it possible to be considerably more flexible with regard to the development and provision of completely new courses. (...)

THE PREPARATION PHASE LEADING TO STRATEGIC PLAN '98

A principal feature of Strategic Plan '95 was a focusing and strengthening of research at DTU. It was therefore decided at an early stage of the preparatory work on Strategic Plan '98 to place the main emphasis this time on our educational programmes and instruction. In the light of the experience gained in the preparation of Strategic Plan '95, a preparatory process has taken place in 1997/1998 involving DTU's management and the Staff-Student and Sector Committees, as well as DTU employees and students and representatives of commerce and industry. (...)

The process of preparing Strategic Plan '98 has revealed agreement between the management, the Staff-Student and Sector Committees, employees and students on a range of general objectives for DTU's development on the teaching side. The aim is to effect a basic change of attitudes and a refining of the concept of knowledge acquisition, in line with the phrase "From Teaching to Learning".

THE CHANGING STAFF AGE PROFILE, STRATEGIC INITIATIVES, AND APPOINTMENTS POLICY IN THE PERIOD 1998-2001

There is at present a considerable imbalance in the age profile of the scientific staff in DTU's departments. A demographically balanced age distribution could be defined as a distribution with approximately the same number of employees in the various age categories. (...)

Having in mind the changing age profile, we will make it a prime goal to ensure that DTU continues to be able to recruit and keep the best qualified persons to fill its scientific, technical and administrative positions. This is one of the most important prerequisites if the research/educational environments are to continue to be or develop to become internationally competitive. It must also be possible for researchers and teachers to initiate and carry out relevant projects, and the facilities for these must be fully up to international standards. (...)

DTU'S DEGREE PROGRAMMES AND THE DEMANDS OF THE FUTURE

DTU offers the following programmes for students:

- a 2-year practically oriented programme, leading to a Bachelor's Degree in engineering;
- a 2-year programme for holders of a Bachelor's Degree wishing to obtain a Master's degree;
- a 5-year research-based programme, leading to a Master's Degree in engineering;
- a 2-year programme leading to a Bachelor's Degree in Food Science and Technology;
- a 5-year programme leading to a Master's Degree in Food Science and Technology;
- a 3-year PhD programme.

In addition, DTU offers continuing education courses both on the campus and through its Open University programme, allowing students and graduates to maintain and further develop their knowledge and expertise. As well as individual courses, these activities include MSc programmes in:

- Environmental Engineering
- Computer Science Engineering
- Management of Technology
- Environmental Engineering Management
- Fire Safety (as of 1999).

(...) In the period covered by the present Strategic Plan, DTU will work for a further clarification of general educational objectives, so that the requirements for flexibility, adaptability, and coherence of the programmes can continue to be met in the future.

It is important for present and potential students and for future employers of graduates that:

- students' attainments in knowledge acquisition and development of competencies are visible throughout the course of studies;
- it is clear what knowledge gains are considered important in the first part of the study programme (a matter which is of particular interest to potential and new students);
- we continue to work on developing students' final specialization, so that they are informative for students, staff, and future employers, as well as being flexible in their form and organization;
- students continue to be ensured freedom of choice in the composition of their own study programmes, and that it continues to be possible to choose on the basis of subject interests.

ENGINEERING SCIENCE GRADUATES OF THE FUTURE

The changes that are taking place in the world around us necessitate ongoing development of the education and training given to future Danish engineering graduates. Thus, it is clear that product development and innovation is going to be very centrally placed in future commercial competition. Competition will intensify in step with increasing globalization, which requires completely new markets to be cultivated in a race with companies from all around the world. Within this trend, a number of target areas can be identified for the further development of DTU's educational programmes.

Our graduates will need to be able to deal with ever more complex problems, partly because of the ever increasing pace of development of new products and new methods of production. There is also a tendency towards increasing complexity of products ("knowledge-heavy" products and a trend away from mass production towards customization of mass-produced products) and a greater emphasis on the relation between price and function, as well as an increasing demand for sustainable production.

Students must, as an integral part of their courses, develop collaborative skill including the ability to work in interdisciplinary teams in order to be able to function effectively and appropriately in their future working lives. Interdisciplinary teamwork will gain more and more importance in the labour market in future, in consequence of the growing complexity of tasks.

The future will also demand a higher level of ability to communicate about technically complex matters, both to members of other professions and to lay people. Successful collaboration depends on the ability to communicate available knowledge effectively.

Our graduates must be familiar with advanced application of IT, regardless of whether their specialization lies within that area or elsewhere. IT must therefore be included as an integral part of the programmes.

Foreign language skills must also be taught as an integral part of the programmes. The increasing globalization of industry means it will be necessary in the future labour market to be able to hold one's own in foreign languages. Globalization also means that, in future, job hunting will take place to an increasing extent in competition with graduates from other countries; and a higher degree of international mobility must also be anticipated in Danish graduates' job seeking. DTU will therefore continue to expand the existing good opportunities for studying abroad.

Students must acquire the ability to put technology and technical science into a societal context. Thus, knowledge and understanding of the external environment, the working environment, and social conditions in general must be included in the instruction given not especially in the form of actual courses, but integrally in the subjects studied.

Students must be made to realize that to be awarded an academic title does not imply that one has finished learning. Technological and social progress necessitate that the individual graduate keep himself or herself constantly up to date with developments in his or her field and in other fields as well.

PRINCIPAL THEMES AND OBJECTIVES FOR THE DEVELOPMENT OF DTU'S EDUCATIONAL PROGRAMMES

National Education Policy and DTU

A considerable portion of the debate on education policy as also of education policy decisions in recent years has been about ensuring greater flexibility in higher education, so as to enable the individual to build further on existing competencies obtained from a short or medium-length higher education, such as a Bachelor degree. It has also been an important requirement that students and graduates should be able to transfer existing competencies to another programme, so that it would not be necessary for an individual who wanted to continue his/her studies in a different direction or take another type of combination programme to start again from the beginning. (...)

At DTU, inter-programme flexibility will be achieved not by funneling all students through the same entrance door, but rather by providing:

- credit transfer arrangements, whereby students can switch between the two programmes at any point in the course of their studies. In such cases, individual study plans are drawn up in which credit can be given for as much as possible of the foregoing studies;
- a superstructure programme, which is a two-year continuation programme for Bachelor level graduates leading to the Master's degree. This programme is open to all holders of a Bachelor's degree in engineering.

DTU considers it important that this flexibility should be increased in the coming years, so that it extends beyond flexibility between the existing programmes. Amongst the means of securing this are:

- ensuring that MSc students as well as BSc students have the opportunity of concluding their course of studies with new combination specialisms. Amongst the means of realizing this is to build further upon the experience of our collaboration with the Royal Danish Veterinary and Agricultural University on the Food Science and Technology programmes; another such means is the combination that is at present practiced in the form of a collaboration in the final year of the programme between DTU, the Copenhagen Business School and the Danish School of Design;

- expanding the type of continued education that is at present offered in the MSc programmes, in English and Danish.

THE BSC PROGRAMME

The characteristic of this programme is that it produces fully trained engineering professionals with distinct technical profiles in three-and-a-half years. In each of its fields of engineering, the programme features a broad base of compulsory subjects, which are the foundation of the technical competence and flexibility that characterize DTU Bachelors in engineering. Later in the programme, a choice of specialization subjects and subject packages ("lines") is available. Over the coming period, DTU will further strengthen the development of programme content, ensuring that the BSc programme will retain its standing as a short, high-quality training in engineering science. (...)

THE MSC PROGRAMME

The MSc programme leads to a degree which is a professional qualification in itself, as well as serving as the entry qualification for doctoral degree studies.

All tendencies towards atomization of the MSc programme as a consequence of its subdivision into many small courses and associated examinations must be counteracted. This is also necessary in order to give scope for understanding-based knowledge acquisition and in-depth study, which are the bases of the high educational quality of the MSc programme. (...)

THE PHD PROGRAMME

DTU has a very large research-educational establishment, which each year recruits a significant proportion of its own MSc graduates, and also MSc graduates from other educational establishments (both national and international). (...)

UNDERSTANDING AS A KEY CONCEPT

Acting on Strategic Plan '98, DTU will continue to develop and enhance educational quality at all levels. The integration existing between research and development on the one hand and teaching on the other must continue to be strengthened and to be a characteristic of DTU educational programmes. (...)

Progress in the engineering sciences generally must be clearly reflected in the educational programmes, which must give students a solid foundation in their field, on which further study can be based at any time. The educational basis with which DTU provides students must thus include both broad and specialized high-level knowledge which ensures familiarity with different areas of their science.

The study programmes must train students' ability to attain command of new subject areas and knowledge rapidly. This requires students to have in-depth understanding of the basic questions which underlie their work in specific subject fields. However, understanding of complex relations requires greater scope for study in depth. (...)

SPECIALIZATION AT THE FINAL STAGE OF STUDIES

(...) In the coming years, DTU will work on a new design for the final part of the study programmes that will provide the adaptability and flexibility to keep step with developments in the relevant technology.

In the last part of the study programme, the student's knowledge must be raised to a level where he/she can be described as a specialist proper. This requires scope for dedicated work in a given subject field. The definition of the level of specialization must be sufficiently dynamic for the programmes not to be restricted by ties to specific courses. (...)

SUPERSTRUCTURE PROGRAMMES AND CROSS-OVER BETWEEN THE BSC AND MSC PROGRAMMES

The best possible conditions must be created for students from the BSc programme to continue in DTU's "superstructure" programmes. This must also apply to holders of BSc degrees who are at present in employment and wish to continue to study part-time. It must also continue to be possible for MSc students who wish to change to the BSc programme to do this in a way that does not compromise the content or form of their studies. (...)

SUPPLEMENTARY AND CONTINUED EDUCATION

In the light of the new competencies which engineering science graduates are expected to have, it is necessary to regard the engineering science programmes also as a platform for a life-long process of learning both as an in-service option and as formal continued education. (...)

DTU will work for continued education not to be seen as a marginal activity, but to be incorporated into the legislation governing the activities of universities in the same way as other educational and research activities. DTU will work towards graduates considering it natural to participate in different types of continued education activities. One of the ways of doing this is to arrange regular events which keep graduates up to date with technological progress.

STRUCTURE AND REGULATIONS

In the light of the above it is clear that the changes that will take place are not just minor modifications of rules governing DTU's educational programmes.

In order that the programmes and the instruction can retain the necessary flexibility and adaptability, rigid rules and ties to specific subject areas which can hinder development must be removed and be replaced by a set of simple and transparent rules that provide guidance rather than restrictions. (...)

ATTRACTING STUDENTS OF BOTH SEXES

(...) One of DTU's objectives is that its educational programmes must at all times be of a sufficiently high quality to attract able students of both sexes.

If DTU, either as a place of study or a workplace, predominantly attracts one of the sexes only, this reduces the population from which students can be drawn, to the detriment both of the University and of society. Increasing demand both nationally and internationally for scientific staff and students makes it necessary to remove barriers which may deter many people, especially women, from starting a career or a course of education in the engineering sciences.

DTU must therefore uncover the barriers that prevent an increase in the number of able female students and work actively to eliminate those barriers which DTU has power to influence.

INTERNATIONALIZATION OF THE EDUCATIONAL ACTIVITIES

In the coming years, DTU will continue to promote internationalization of its educational programmes. We must work towards a continued increase in the number of able foreign students desiring to carry out part of their studies at DTU. (...)

DTU must also endeavour to give Danish students the opportunity of spending one or two semesters at a foreign university or in a work placement abroad. (...)

The Physical Facilities and Study Environment

THE STUDY AND SOCIAL ENVIRONMENT

It is important that student life give the individual more than just technical knowledge and skills. It should also offer challenges at the personal level and the opportunity to begin building a network of professional and social contacts. DTU must help provide a framework that enables students to seek out such challenges. (...)

THE PHYSICAL FACILITIES

DTU's building stock has now reached an age of between 25 and 35 years, without any substantial or radical modernization until the rebuilding of the chemistry laboratory ventilation plants was begun a couple of years ago. Despite the comprehensive acquisitions of equipment and modernization which have been made possible over the years by a high level of external financing, large parts still remain as they were fitted out when they were built thirty years ago. Experimental facilities, laboratories and workshops in some cases still correspond to an industry that has undergone enormous changes in the intervening period. (...)

Premises must be provided that are suitable for the new teaching and working methods. A number of modern workshop and experimental facilities must be set up, and the scope for increasing the proportion of experimental work must be increased. DTU's buildings should have an attractive appearance, and the students' and staff's physical working environment must be of a very high standard. (...)

DTU RESEARCH

As the largest educational establishment for the engineering sciences in Northern Europe, DTU has a very great research potential distributed across all important areas of engineering science. DTU is the only Danish player in a number of these fields, for example, engineering science aspects of chemical engineering and biotechnology, shipbuilding, etc. (...)

INTERNATIONALIZATION OF RESEARCH

An important element in quality development at DTU is the internationalization of our research. DTU will continue to foster this through a variety of means, including:

- attracting visiting researchers and teachers of high international standard;
- stimulating the setting up of international research projects and research networks and participating in the EU's Fifth Framework Programme for Research and Technological Development;
- attracting foreign PhD students;
- establishing sabbatical schemes, to encourage DTU's scientific staff to spend substantial periods at foreign research establishments and universities;
- participating in organizations for international cooperation and working actively through them to foster opportunities for DTU scientific staff to take part in research collaboration at a high international level.

The Twelve Focus Areas

DTU's success in the twelve focus areas identified by Strategic Plan '95 must be maintained. Therefore, the focusing in our field of activity will be in all essentials a continuation of the objectives of Strategic Plan '95.

In addition to the twelve focus areas, DTU will continue to maintain and further develop strong environments in the scientific fields that are the essential foundations of the engineering sciences. It is therefore explicitly emphasized that research and teaching in physics, chemistry, and mathematics will be prioritized on an equal footing with the technological research.

BIOTECHNOLOGY

By virtue of the teaching and research conducted by its chemical, biochemical, and chemical engineering departments, DTU plays a principal role in the realization of the great potential of the biotechnological and food industries. (...)

ENERGY AND ENERGY TECHNOLOGY

The primary objective of research in this area is to ensure sustainable energy production. The parameters governing this research are scarcity of resources, efficient utilization of resources, and renewable energy. (...)

INFORMATION TECHNOLOGY

Information technology is one of the areas in society showing the strongest growth. The modern infrastructure with widespread use of computers and many offers of services for use of information in electronic form is a direct product of IT. (...)

DESIGN AND SAFETY

DTU research in this area is targeted at developing structures and industrial products which take into account safety, economy, minimal consumption of resources, aesthetics, a clean environment, and durability. New and advanced materials, the development of new methods of production, better analysis capabilities and systems for the processing of information combine to enable researchers at DTU to develop new forms of design and construction. (...)

MATERIALS TECHNOLOGY AND PROPERTIES

An understanding of the physical and chemical properties of materials in general as well as at the microscopic and atomic levels forms the basis for the development and production of a wealth of materials used everywhere in our society: metals, new types of concrete, ceramic materials, polymers and composite materials, including fibre-reinforced polymers. (...)

BIOMEDICAL ENGINEERING

(...) It is a characteristic of the field of biomedical engineering that it is interdisciplinary to a high degree. Research and development in this field involves both physicians and technical experts. DTU's focus on biomedical engineering is based on a strong position in signal and image processing (*e.g.*, scanners), acoustics and electronics (*e.g.*, hearing aids), design of apparatus (*e.g.*, kidney machines), and clinical chemical analysis (*e.g.*, blood tests).

MICROSTRUCTURES AND NANOTECHNOLOGY

The development of microtechnologies has come so far that microsystems are already a part of the everyday life of many people. (...) The special characteristics of nanostructured materials will form the basis for the future development of components and processes utilizing new principles. DTU will invest in being part of this development, which will be basic to important parts of technology in the coming decades.

ENVIRONMENTAL TECHNOLOGY

(...) DTU will help bring about a fuller understanding of the causes and development of damage to the environment, and work on preventive measures and action to remedy damage already caused. This includes the working environment. (...)

Measures to remedy environmental damage are another central area of interest at DTU. Means of detecting environmental damage include soil, water and air analyses, the use of telemetry, and noise analysis. Work is in progress on the development of sensors and intelligent monitoring systems as well as the development of purification processes for soil, solid waste, smoke, groundwater and industrial and municipal waste water.

PLANNING AND TECHNOLOGY MANAGEMENT

(...) DTU will intensify its work on developing decision-making models that can include technical, financial, organizational, information and environmental aspects, etc., in the technological decision-making process.

Official bodies as well as private companies face complicated planning situations, *e.g.*, in the areas of traffic and transport. DTU will therefore further develop research in this area, with especial emphasis of traffic IT and transport technology. (...)

PRODUCTION AND PRODUCTION PLANNING

(...) Some typical areas of activity directly connected with DTU's research and teaching in the key disciplines that together form the basis for production and process technology are thermodynamics, transport processes, reaction technology and integrated control, and integrated building design, including the application of IT methods.

On the background of DTU's research and Danish industry's development of ever smaller micromechanical components, microelectronics, integrated flow systems, sensors, actuators, etc., DTU will make the development of process and production technology for the industrial manufacture of small components/products in metal, plastics, and ceramics a special target area.

SHIPBUILDING AND MARINE TECHNOLOGY

(...) In Denmark, teaching and research in these areas are gathered at DTU. The research is based on the sciences of fluid mechanics, strength of materials and structures, and risk assessment, and comprises all aspects of the design, construction and operation of ships and structures in marine environments. Globally, an intense concentration of populations in coastal areas is taking place, and research related to this has a high priority internationally. DTU has a strong and internationally well located environment for research on coastal processes and coastal structures.

TELECOMMUNICATIONS

(...) DTU is an international leader in research on components and systems for optical communication, and is also at the international forefront with regard to the development of ways of increasing transmission capacity by appropriate source and channel coding. In addition, DTU has built up an international reputation as an authority on application and social aspects of telecommunication services.

Building further on this strong basis, DTU will continue to focus on telecommunications and networks. It is planned to particularly intensify activities in the areas of communication, optics, and materials, and in distributed multimedia design and application.

THIRTEEN CRITERIA FOR SUCCESS IN RESEARCH

i) Number of peer-reviewed publications in international journals.
ii) Number of peer-reviewed publications presented at conferences and published in proceedings.
iii) Number of EU contracts.
iv) Exchanges at PhD student and post-PhD levels.
v) Other exchanges.
vi) Number and extent of collaboration agreements with commerce and industry.
vii) Number of projects under the Danish Industrial PhD Research Scholarship Programme.
viii) Other indicators for interaction with commerce and industry.
ix) Amount received in external funding.
x) Number of final projects (undergraduate and Master's thesis projects) from members of the group accepted within (*e.g.*,) the last three years.
xi) Number of accepted doctoral theses from the group within (*e.g.*,) the last three years.
xii) Number of PhD students in the group.
xiii) Number of PhDs, research associates, and senior research associates in the group.

THIRTEEN EXPECTATIONS OF QUALITY OF INSTRUCTION

i) DTU's organizational structure should inspire and facilitate sustainable development of its educational activities based on close contact with potential employers.

ii) The scientific content of the instruction should be on an international level.

iii) DTU should inspire its students to take responsibility for their own progress in knowledge, so that they can continue a life-long learning process in their subsequent professional lives.

iv) Good teaching work should be recognized, and teaching experience and results given due weight, when appointments are made.

v) The physical facilities should be such and the administrative routines adapted, so that they foster quality development of the instruction and a good study environment.

vi) DTU should endeavour to attract able new students of both sexes.

vii) Instruction should be performed and evaluated by teachers and students in a dialogue of equals with respect for the role of each side.

viii) Departments should follow up on the evaluations. The results of the evaluations should be included in the process of educational quality development.

ix) Planning and provision of instruction and choice of teaching materials should be a joint matter for students and instructors in each department.

x) Course planning should respect prior attainments and ensure that the competencies obtained by students can be optimally utilized in subsequent courses where taken.

xi) Instructors at DTU should show commitment to teaching and interest in the improvement of communication of knowledge. They should continue to develop their teaching skills, *e.g.*,, by supplementary training, study visits, participation in conferences, and work in development and research.

xii) The instruction should create optimum conditions for students' personal development.
xiii) The instruction should have the effect of conferring on students both theoretical understanding and the ability to exercise a range of specialist skills.

Ceska Zemedelska Univerzita v Praze

UNIVERSITY STRATEGIC DEVELOPMENT PLAN (SDP) - 2001

Basic aspects

A. ORGANIZATION STRUCTURE

i) Completing and controlling implementation of SDP document;
ii) Strengthening inter-faculty links and decreasing boundaries between the faculties (inter-faculty, study programmes);
iii) Improvement of effective staff appraisal system linked to staff development (in 2000/2001);
iv) Continuing development of the University Information System in all its components in direction to its internal users and external beneficiaries.

B. EDUCATION PROGRAMMES

i) Establishment of two-level education system with a clear distinction (completion in 2001/2002);
ii) Approval of introducing ECTS unified within the University;
iii) Reduction of overlapping in subjects and preparation for the modularization of curricula;
iv) Decreasing an extent of weekly number of contact hours and introducing new forms of education enhancing self-reliant role of students;
v) Introducing more extensively teaching in foreign languages, running MSc Courses in English/German;

vi) Enhancing the role of economy and ecology. Promotion of environmental management.

C. QUALITY ASSESSMENT OF EDUCATION

i) Evaluation of the teaching/learning process. Incorporation of the findings of the EU Evaluation Team;
ii) Clear link between Bachelor and Master programmes. Greater choice of courses for Master programmes;
iii) Analysis and improvement of examination system;
iv) Standardization of the student's assessment system (questionnaires).

D. STAFF AND STUDENTS

i) Implementation of a new personnel evaluation system to stimulate a professional career (*i.e.*, publishing activity, research involvement, etc.);
ii) Preparation of a better student counseling system oriented to job market possibilities;
iii) Supporting the system of language education in all forms including teaching in foreign languages and mobilities abroad;
iv) To strengthen effectively the Student Association and to establish Alumni Chamber co-operating with CUA.

E. RESEARCH AND EXTENSION

i) Enhancing both basic and applied research keeping a good balance between, with respect of granting policy;
ii) To implement more research in education and to involve more students in research;
iii) Increasing efficiency in PhD study with higher emphasis put on research to consider interdisciplinarity, writing thesis in English, etc.;
iv) To support a participation of departments in EU Programmes (5th Framework in particular);

v) Strengthening a Centre for rural extension for a better co-operation with agriculture and forestry practices.

F. INTERNATIONAL CO-OPERATION

i) Promoting the CUA's active participation in EU programmes. In particular, supporting the SOCRATES/ERASMUS co-operation (education) and the 5th FRAMEWORK EU Programme (research);
ii) Europanization of education and research (searching for European dimensions);
iii) Promoting our mobilities abroad, running seminars, intensive courses and summer courses at CUA Prague;
iv) Acquisition of funding from international programmes;
v) Utilizing expanded European cultural opportunities for students and staff members;
vi) Gaining increased international credit.

A LEARNING AND TEACHING STRATEGY

University of Essex

INTRODUCTION

The University of Essex Learning and Teaching Strategy draws together existing and planned activities as a firm foundation for innovation and enhancement. The focus of the Strategy is on areas in which developments are already in process as a result of planning at the departmental and University level, to strengthen these and to encourage further initiatives. It is these goals, rather than general statements of good intent, which shape the Strategy. It also sets targets and indicators for measuring achievements and establishes a resource planning and management process to monitor and review learning and teaching activities. The Strategy will engage all groups involved in learning and teaching, not only students, academic staff, and other teaching staff, but also those responsible in administrative and service sections of the University for the support and enhancement of learning and teaching. It is designed to improve the educational experience of students on both undergraduate and postgraduate programmes.

The Strategy is in keeping with the University's mission and fully reflects overall strategic planning, as detailed in Section 5 below.

DEVELOPMENT OF THE LEARNING AND TEACHING STRATEGY

The development of the strategy has been an ongoing process which started in June 1996 (...)

The articulation of current policy into this enhanced Learning and Teaching Strategy has provided the occasion to extend and develop strategic planning in consultation with the wider University community as well as with key personnel responsible for delivering the Strategy.

INSTITUTIONAL CONTEXT

The University's commitment 'to achieve the highest quality, judged by international standards, in its research and scholarship and in the education it provides' is set out in its Mission Statement. The Learning and Teaching Strategy is consistent with and supports the University's overall strategic planning which aims to:

- Achieve strength in depth based on departments in selected areas of the social sciences, the humanities, the natural sciences and the professions, and the fostering of intellectual co-operation between these areas;
- Emphasize research excellence and graduate education and training;
- Provide teaching closely linked to the research interests and strengths of the academic staff;
- Foster interdisciplinary and comparative studies;
- Sustain the international character of the student body and academic programmes;

- Promote equality of opportunity for its students and staff;
- Contribute to the educational, cultural and economic needs of the locality and the region.

The University is relatively small for a non-specialist institution (5722.5 FTE as at 1 December 1999) but is planning for a 20 percent growth in student numbers over the period 1999/2000 to 2003/2004. The Learning and Teaching Strategy is designed to support the University's priorities for expansion.

The comparatively small number of its academic departments covers a broad range of disciplines. The Learning and Teaching Strategy is tailored to the demands of a wide discipline-base but with commonality of approach to encourage interdisciplinary co-operation and the sharing of information, facilities, and above all good practice.

The University is research-strong, with fifteen of its sixteen departments rated 4 or above in the 1996 Research Assessment Exercise. Strategic planning, including that of the Learning and Teaching Strategy, is consistent with maintaining the University's position as a leading research institution through the provision of the necessary infrastructure and environment for all academic staff to engage in high-quality research.

The University has a relatively high proportion of postgraduate students (28 per cent of total student numbers as at 1 December 1999) and plans to increase taught and research postgraduate student numbers by offering new taught postgraduate degree schemes, with an emphasis on part-time provision, and by enhancing its Continuing Professional Development (CPD) programmes. The Learning and Teaching Strategy is integrated with this objective.

There is a long-standing commitment to the recruitment of mature students (age 21 and over on entry) and to encouraging access of underrepresented groups. 22 percent of the undergraduate student population as at 1 December 1999 were mature students. The University's performance in recruiting students from HEFCE's geodemographically disadvantaged areas is notably high for a research-intensive pre-1992 university.

International students (overseas and European Union) made up 41 percent of the total student body as at 1 December 1999. The University is committed to providing this group of students, in common with all other students, with the secure and supportive collegial community necessary for their academic, social, and personal needs. The Learning and Teaching Strategy makes a positive contribution to this process.

Innovation and initiatives at departmental level are central to the culture of the University. Departments operate within the framework of the University's procedures but are encouraged to develop them in the light of their own circumstances and to supplement them with new initiatives. The Quality Assurance Office and Schools Administration survey and consider best practice and encourage its dissemination amongst departments. This best practice then forms the basis for development and improvement, and for the establishment of enhanced requirements by the Academic Standards Committee. The University's Learning and Teaching Strategy will operate within this iterative and developmental framework.

The University is committed to enhancing its contribution to the local and regional community through working with partner colleges in Colchester (for example Colchester Sixth Form College and Colchester Institute) and in the region (including a major partnership with South East Essex College in Southend), to widen participation amongst sections of the population and geographical areas currently underrepresented in higher education and as part of the University's planned expansion of funded student numbers. The Centre for Continuing Education (to be renamed the Centre for Lifelong Learning) is responsible for the University's credit-bearing Continuing Education programme, committed to providing new progression routes into part-time and full-time higher education. The Learning and Teaching Strategy addresses the learning and support needs of these groups of students. In addition, the University's new Business Development and Regional Office, expanded through a successful bid to the Higher Education Reach-out to Business and the Community Fund, will enhance the University's response to the needs of regional business and public sector organizations, including its ability to meet the employment and skills needs of the region. The Learning and Teaching Strategy, particularly in relation to employability, key skills, and information technology resources, is expected to contribute to the University's regional objectives.

OBJECTIVES IN LEARNING AND TEACHING

The basic objectives of the strategy are:

- to provide a high-quality education primarily in established academic disciplines;
- to provide a coherent institution-wide framework for the University's learning and teaching activities;
- to allocate resources for teaching and learning in accordance with the University's corporate plan;
- to develop learning and teaching objectives built on the University's existing strengths and successes in widening participation, student retention, and progression and "value-added" academic achievement.

The following elements have been identified as central to the achievement of the basic objectives:

- supporting innovation in the design and delivery of the curriculum at both undergraduate and postgraduate level with particular attention to technology-assisted and student-centred approaches;
- assisting students in developing and evidencing employability skills and helping them to develop as capable lifelong learners through the Pro-File system and the Essex Skills Award;

- supporting and assisting departments to identify, make explicit, and enhance the key skills content of the curriculum;
- supporting, enhancing, and rewarding good teaching practice through the provision of a Staff Development Programme, induction and training, student assessment of teaching and courses, and promotions procedures;
- providing high quality learning and teaching resources through continued high investment in Library resources, a high level of student access to IT systems, and continuous enhancement of teaching facilities, lecture theaters and teaching rooms and equipment;
- facilitating the relationship between research and teaching in the curriculum at both undergraduate and postgraduate level;
- enhancing learning and teaching skills and understanding amongst departments, and in the University's external partnerships by sharing innovation, training, information, and good practice;
- securing provision for continuous quality enhancement of learning and teaching activities.

RELATIONSHIP TO OTHER UNIVERSITY POLICIES AND STRATEGIES

The objectives of the Learning and Teaching Strategy are embedded in and supported by existing University policy and strategic planning.

Financial Strategy

- supporting the provision of high quality teaching and learning resources by aiming to generate a larger income and expenditure surplus required to meet a pressing need for new teaching space, facilities for expanding and bringing together science facilities and improving facilities to support the continuing growth of students on campus;

- planning to increase student numbers by expanding and developing a number of academic areas where recruitment is buoyant and the University has a track record of excellence. (...)

Capital Building Strategy

- relocating cognate departments and activities closer together;
- addressing an acute shortage of academic, teaching, and research space;
- providing a new Open Access Computer Laboratory, improvements to language learning facilities and multimedia facilities to support expansion of new academic programmes;
- establishing a new Learning Resource Centre, subject to the success of a bid for HEFCE funding, to include a further 30-workstation open access computer laboratory, video editing facility, new staff IT/AV training suite, desktop conferencing facility, and workspace for technical support staff.

Staff Development Strategy

- Staff development programmes are a core activity in the support for teaching. Departments identify and prioritize the staff development needs they require to provide support for teaching, arrange to meet the needs that can be addressed through internal departmental resources, and refer other needs to the Staff Development Office to plan central provision to meet the aggregated needs of departments. The Staff Development Office provides staff development activities in accordance with the priorities approved by the Staff Development Advisory Group on the basis of Heads of Departments' prioritized requests for staff development provision.
- The Staff Development Advisory Group supports teaching though the strategic use of staff development

and forms a link with the Vice-Chancellor's Advisory Group to guide provision in accordance with the goals of the University.

Information Systems Strategy

- Strategies for access to computing facilities by students will aim to minimize problems for particular groups, for example, those living off campus or unable to buy their own equipment.
- Action will be taken to meet the greater demands for student access to information systems services arising from the planned expansion of student numbers, particularly through the provision of open access workstations, dial-up provision and IT induction training.
- Information systems will be used to provide support for student-centred learning, distance education, part-time students.
- New technology will be used in creative ways to promote innovation in teaching. The main thrust will be towards the use of generic technologies applicable across all disciplines.

Widening Participation Strategy

- Equality of opportunity will be encouraged by directing activities towards those under-represented groups where the University has the experience and the potential to achieve success, *e.g.*, through Access, mature students, students with non-standard qualifications, and students from geodemographically disadvantaged areas.
- In reviewing existing undergraduate schemes and formulating new ones, the University will seek to enhance accessibility and to support student retention, with particular reference to flexibility in modes of study and appropriateness of curriculum.

- Planned developments have a local and regional accent, building on existing collaborative activities with other educational institutions in Essex and the wider Eastern region.
- University policy with respect to mechanisms to support retention within higher education is that these should be available for all students not just those from non-traditional and/or disadvantaged backgrounds.

Key Skills Strategy

- helping students to reflect on and develop their key skills;
- developing the explicit identification and enhancement of key skills currently implicit in many courses and degree programmes;
- putting in place measures to assist students to enhance the key skills acquired through their degree programmes, other University and wider activities, and employment;
- introducing the Pro-File system and Essex Skills Award in support of these objectives.

Regional Strategy

- continuing to work with the group of institutions from Essex, Suffolk, Norfolk and Cambridgeshire with which the University has carried out a HEFCE-funded exercise to map areas of low participation in the region. After the success of the group's Phase 2 bid to HEFCE, University action on widening participation will be shaped by this collaborative framework, and by the dissemination of good practice amongst the institutions involved;
- mutual sharing of good teaching practices between the University and its partner colleges and further development of collaborative relationships in the region (*e.g.*, Writtle College and East 15 Acting School);

- providing Continuing Education and Continuing Professional Development as a contribution to Lifelong Learning;
- expanding, through the University's new Business Development and Regional Office, relationships with employers which will, in addition to other benefits, develop work and project placements, work experience, student mentoring, and contribute to a broader employability and skills programme.

Equal Opportunities Strategy

- The University is committed to a comprehensive policy of equal opportunities. It aims to create the conditions whereby students and staff are treated solely on the basis of their merits, abilities, and potential, regardless of gender, colour, ethnic or national origin, age, socio-economic background, disability, religious or political beliefs and affiliations, family circumstances, sexual orientation, or other irrelevant distinction.

Admissions Strategy

- widening participation of under-represented groups, including enabling increased access by mature students and others with non-standard entry qualifications;
- developing degree programmes which enhance student employability through addressing skills shortages and through curricula which provide key skills;
- developing collaborative programmes with specific post-16 colleges at local and regional level to improve access support for their students and to work jointly with schools in disadvantaged areas and those with low HE participation rates.

Quality Assurance Strategy

- developing a new long-term strategy for the collection of student opinion on the quality of both teaching and courses;
- improving quality assurance procedures at University, School and departmental level, and to promote their more effective integration;
- providing improved management information on student progression to facilitate monitoring at key points relevant to student retention.

Key Components of the Strategy 1999/2000 to 2003/2004

- supporting innovation in the design and delivery of the curriculum at both undergraduate and postgraduate level;
- providing expert technical and pedagogical support and advice;
- the Teaching and Learning Innovation Fund (TALIF);
- the Learning and Teaching Forum (LTF);
- mutual sharing of innovative teaching and best practice techniques developed through the University's partnership with South East Essex College;
- the Large Group Teaching Project;
- encouraging the use of more varied assessment practices.

Developing Key Skills and Employability Skills

- the Key Skills Steering Group;
- pro-File - a system to enable students to reflect upon and record skills they have developed through their academic courses, extra-curricular activities, and work experience;
- supporting and assisting departments;
- the Essex Skills Award (ESA);
- supporting, enhancing and rewarding good teaching practice;

- the Staff Development Programme;
- induction Training Courses;
- support and training for experienced staff;
- peer observation;
- support for Graduate Teaching Assistants;
- student assessment of teaching and courses;
- training in the use of ICT, multimedia, and other technology in teaching;
- rewarding good teaching through promotions;
- the application of a clearly defined career structure for Teaching Fellows.

Providing High Quality Teaching and Learning Resources

- mechanisms to ensure that, within the context of funding constraints, learning and teaching resources are of high quality and are allied to developments identified in other parts of the Learning and Teaching Strategy;
- continued high investment in Library resources per student;
- facilitating a high level of student access to IT systems;
- Learning Resource Centre (LRC);
- planned Development of Library Provision;
- lecture theatre and teaching room refurbishment;
- responding to the need for high-quality resources in new or expanding areas of the curriculum.

Planning and Management Structure

- Change Mechanisms;
- Learning and Teaching Committee;
- Academic Policy Committee (APC);
- departmental committees and designated departmental academic staff;
- Quality Assurance Procedures.

Review and Revision Process

The Learning and Teaching Strategy will be reviewed on an annual basis by the Learning and Teaching Committee, which will report to Academic Policy Committee and recommend revisions to either the Strategy itself or the targets. Academic Policy Committee will consider these and other proposals for revision and report to the Senate.

KEY TARGETS AND MILESTONES

Table 1. Supporting innovation in the design and delivery of the curriculum

Component	Milestones/Targets	Implementation	Monitor/Review
Large Teaching Group Project	Initiation: September 2000. 50 percent of departments involved by January 2001. All departments involved by October 2001.	Learning and Teaching Development Officer	Learning and Teaching Committee

Table 2. Developing key-skills and employability skills.

Component	Milestones/Targets	Implementation	Monitor/Review
Identifying key skills content in curriculum	All existing departments consulted by September 2001 and all courses in existence at that time to carry published key skills content by September 2002.	Key Skills Officer, Learning and Teaching Development Officer	Key Skills Steering Group, Academic Policy Committee

Table 3. Supporting, enhancing, and rewarding good teaching practices

Component	Milestones/Targets	Implementation	Monitor/ Review
Induction Training Courses	ILT recognition by February 2001.	Staff Development Officer, Learning and Teaching Development Officer	Staff Development Advisory Group

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Table 4. Providing high quality teaching and learning resources.

	Milestones/Targets	Implementation	Monitor/ Review
Facilitating high level of student access to IT systems	Network halls of residence: 98 percent of study-bedrooms by October 2000, 100 percent by October 2001. Expansion of central student workstation provision from 384 in 1999 (including Library) to 454 in January 2001. Increase from 40 to 50 dial-up lines by January 2001. Student IT induction: follow up pilot scheme in 1999, introduce self-assessment and drop-in courses for all new students in 2000, review and finalize scheme in 2001.	Director of Information Systems	Academic Policy Committee

GOVERNANCE AND POLICY-MAKING: STRATEGIC PLANS IN ROMANIAN UNIVERSITIES

Since 1990, the Romanian higher education sector changed in important ways. The number of higher education institutions, private and public, increased dramatically; the number of students doubled in less than five years; the study programmes diversified, a new legislation has been passed, and all these have been accompanied by institutional democratization, the concern to improve teaching and research laboratory infrastructure, the expansion of international communication and co-operation.

The Education Act entered into force in 1995. It includes provisions concerning full university autonomy of both public and private institutions. The move away from a highly centralized system involved:

- The establishment of independent bodies in charge of quality assurance, university research, and financing mechanisms; the Rectors' Conference was established;
- The development of the autonomy of higher education institutions:
  - the autonomy to establish and develop study programmes, at both undergraduate and graduate levels;
  - financial autonomy in the use of budgetary and non-budgetary funds. Starting with 1999, a new scheme, formula based, of financing public universities was introduced;
  - managerial and quality assurance autonomy;
- Redefining the role of the Ministry of Education. Its main mission is to develop new national policies on higher education. The key priorities are:
  - quality enhancement of teaching, learning, and research;
  - developing an active partnership among the university, public services, and the industry;
  - enhancing equity in higher education;
  - extension of the intra- and interinstitutional communication, direct and via the new ICTs.

The reform of the Romanian higher education along these lines brought about the need to develop a new type of relations between universities and the Ministry of Education. One policy paper prepared at that time expressed it boldly:

> The reference basis for an institution's eligibility for public financing should be the preparation and evaluation of its strategic plan for institutional development. The plan should refer to short-, medium-, and long-term institutional development, and to the institutional relations with the labour market and community needs. CNFIS (The National Council for the Funding of Higher Education) and CNEAA (The National Council for Academic Evaluation and Accreditation)

> incorporate the representatives of the Romanian academic community involved in assessing the quality and realism of the institutional plans for strategic development. They advance proposals as to the amount of the basic financing. Together with them, CNCSU (The National Council for University Scientific Research) will focus on the issue of complementary financing. Basic and complementary financing – granted on a competitive basis – and the institutional plans for strategic development are the tools designed to initiate the market mechanisms in our higher education system. Autonomy-invested university institutions are expected to assert their entrepreneurial spirit, the capacity to prove the quality of their offered services, to be competitive in terms of students and available public funds. (Vlăsceanu, 1998).

As explicitly expressed in this paper, strategic plans are viewed as mechanisms allowing for a dialogue between the Ministry of Education and higher education institutions. Their main role is to balance the targets and objectives set up at the national level, and the objectives and priorities of each higher education institution. More specifically, strategic plans are instrumental in establishing the level of budgetary funds allocates to each and every higher education institution.

The necessity to prepare institutional strategic plans stemmed on the side of the Ministry of Education. In 1998, it issued a directive that laid down the basis for preparing such plans by each Romanian higher education institution. According to that (Brătianu and Ciucă, 1999),

- Higher education institutions have to prepare strategic plans following a certain matrix. The document is required to have the following structure:
    - an expression of the vision and mission of the university;
    - a statement of the strategic objectives of the university (the time horizon is 4 years);

- key priorities;
- an operational plan.

The plan should cover the following domains:

- the learning and teaching strategy;
- the research strategy;
- the quality assurance strategy;
- the internationalization strategy;
- the human resources development plan;
- the managerial reform plan;
- financial plan;
- postgraduate activity and lifelong learning objectives;
- the development of physical facilities.

The institutional strategic plans were the result of a long and complex consultation process which involved:

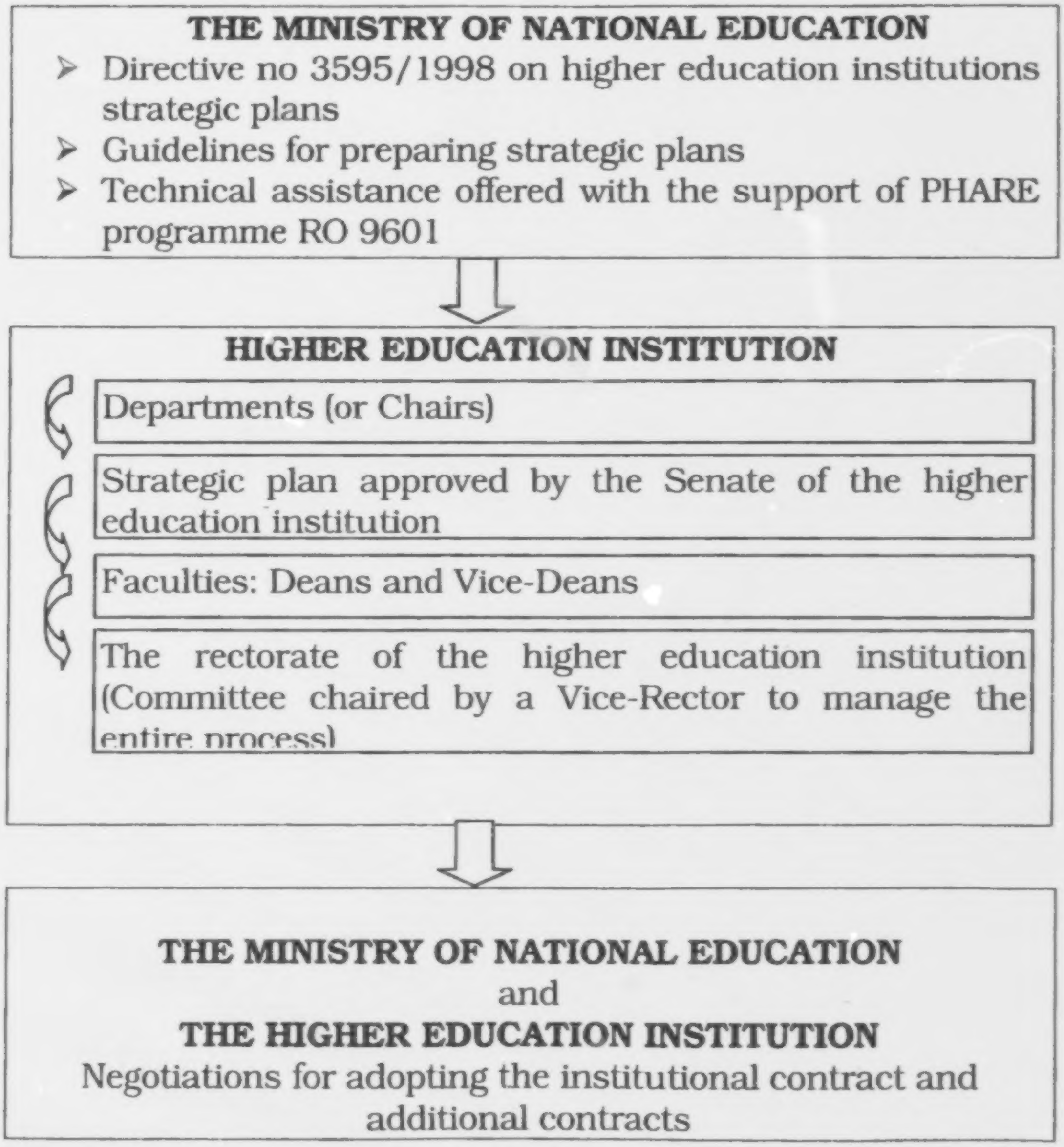
- the rectorate of the higher education institution; usually, the Senate appointed a Committee chaired by a vice-Rector to manage the entire process;
- the Deans and Vice-deans, at the level of faculties;
- Heads of Departments (or Chairs).

The Strategic Plans, including operational plans, were approved by the Senate of higher education institution, and then presented to the Ministry of Education. In the first semester of 1999, they were reviewed in the General Directorate for Higher Education in the Ministry of Education, and represented the bases for the negotiations that were carried out in May-June 1999 between the Ministry and each university.

The negotiation process between the Ministry of Education and Higher Education Institutions concerns both the strategic objectives of the university and also the operational ones. It is transparent and aims at the best result in balancing the national and the institutional interests and policies.

The result of this process is the institutional contract between the Ministry and the higher education institution. It is expressed in very clear terms, and concerns the kinds of institutional objectives that are supported with budgetary funds:

- formula-based allocations for study programmes (at undergraduate, postgraduate, and doctoral levels);
- social facilities funds (fellowships, dormitories, student transportation, etc.);
- capital investments funds.



THE MINISTRY OF NATIONAL EDUCATION

- Directive no 3595/1998 on higher education institutions strategic plans
- Guidelines for preparing strategic plans
- Technical assistance offered with the support of PHARE programme RO 9601

HIGHER EDUCATION INSTITUTION

Departments (or Chairs)

Strategic plan approved by the Senate of the higher education institution

Faculties: Deans and Vice-Deans

The rectorate of the higher education institution (Committee chaired by a Vice-Rector to manage the entire process)

THE MINISTRY OF NATIONAL EDUCATION
and
THE HIGHER EDUCATION INSTITUTION
Negotiations for adopting the institutional contract and additional contracts

As a matter of fact, the institutional contract is accompanied by one or more complementary contracts. These contracts concern budgetary funding for

- research;
- other investments;
- subsidies for specific programmes and projects.

The implementation of the strategic plan requires the elaboration by each higher education institution of a detailed budget. The funds taken into account have different sources, of which only a part derive from the state budget. (It might be significant to note that in 2001 the proportion of state budget funds in the overall budget of Romanian higher education institutions varied from 25 percent to 80).

The implementation of the strategic plan is subject to annual review by the Ministry of Education and The National Council for the Funding of Higher Education (CNFIS). This review plays an important part in the negotiations between the Ministry and the higher education institution for signing a new annual institutional contract.

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